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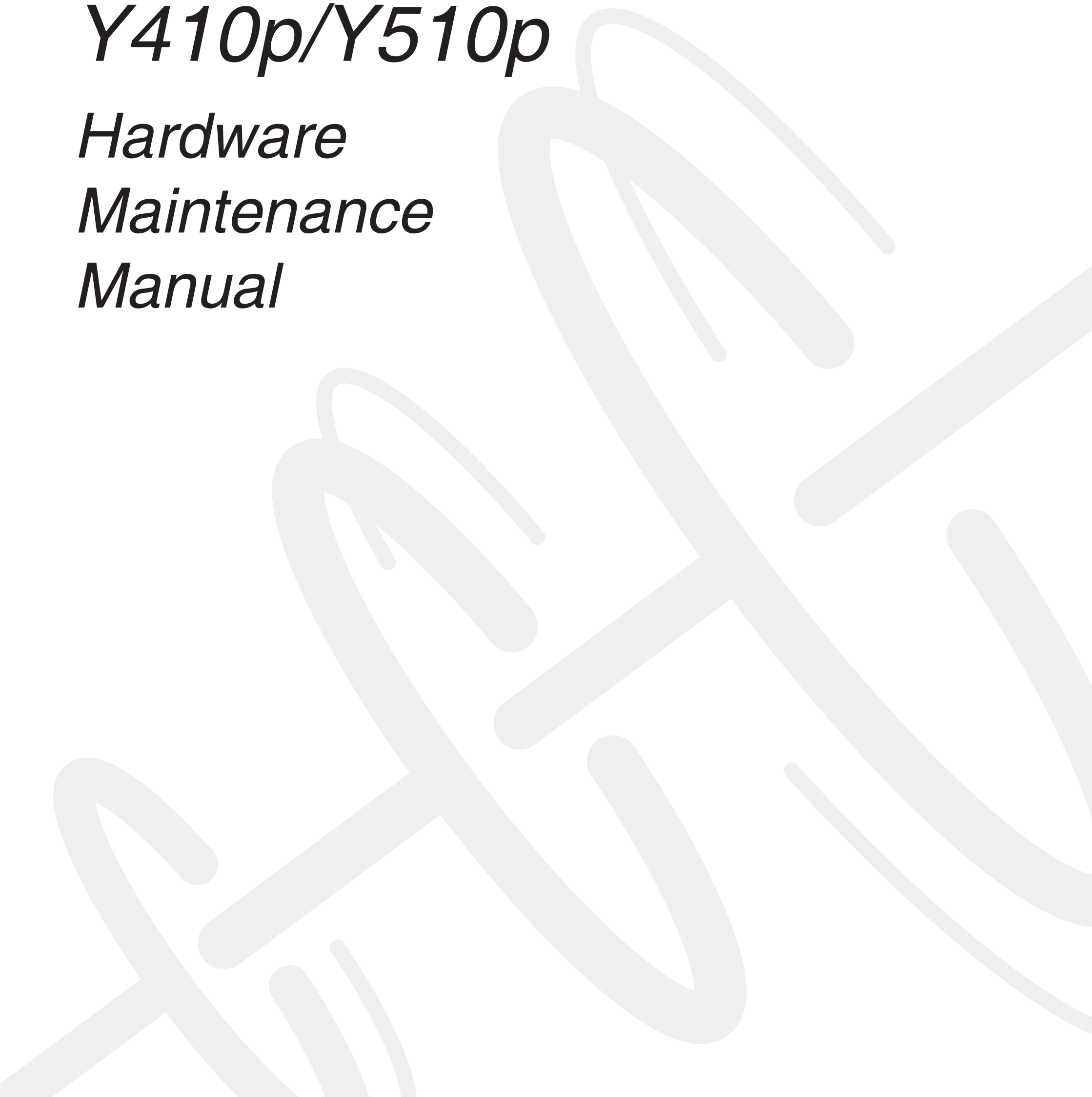
Lenovo IdeaPad Y410p/Y510p

Hardware Maintenance Manual



Note:

Before using this information and the product it supports, be sure to read the general information under “Notices” on page 107.

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About this manual

This manual contains service and reference information for the following Lenovo product:

Lenovo IdeaPad Y410p/Y510p

Use this manual to troubleshoot problems.

The manual is divided into the following sections:

- The common sections provide general information, guidelines, and safety information required for servicing computers.
- The product-specific section includes service, reference, and product-specific parts information.

Important:

This manual is intended only for trained servicers who are familiar with Lenovo products. Use this manual to troubleshoot problems effectively.

Before servicing a Lenovo product, make sure to read all the information under “Safety information” on page 1 and “Important service information” on page 16.

Safety information

This chapter presents the following safety information that you need to get familiar with before you service a Lenovo computer:

- see “General safety” on page 2
- see “Electrical safety” on page 3
- see “Safety inspection guide” on page 5
- see “Handling devices that are sensitive to electrostatic discharge” on page 6
- see “Grounding requirements” on page 6
- see “Safety notices: multilingual translations” on page 7
- see “Laser compliance statement” on page 14

General safety

Follow these rules below to ensure general safety:

- Observe a good housekeeping in the area where the machines are put during and after the maintenance.
- When lifting any heavy object:
    1. Make sure that you can stand safely without slipping.
    2. Distribute the weight of the object equally between your feet.
    3. Use a slow lifting force. Never move suddenly or twist when you attempt to lift it.
    4. Lift it by standing or pushing up with your leg muscles; this action could avoid the strain from the muscles in your back. Do not attempt to lift any object that weighs more than 16 kg (35 lb) or that you think is too heavy for you.
- Do not perform any action that causes hazards to the customer, or that makes the machine unsafe.
- Before you start the machine, make sure that other service representatives and the customer are not in a hazardous position.
- Please remove covers and other parts in a safe place, away from all personnel, while you are servicing the machine.
- Keep your toolcase away from walk areas so that other people will not trip it over.
- Do not wear loose clothing that can be trapped in the moving parts of the machine. Make sure that your sleeves are fastened or rolled up above your elbows. If your hair is long, fasten it.
- Insert the ends of your necktie or scarf inside clothing or fasten it with the nonconductive clip, about 8 centimeters (3 inches) from the end.
- Do not wear jewelry, chains, metal-frame eyeglasses, or metal fasteners for your clothing.

  Attention: Metal objects are good electrical conductors.
- Wear safety glasses when you are hammering, drilling, soldering, cutting wire, attaching springs, using solvents, or working in any other conditions that may be hazardous to your eyes.
- After service, reinstall all safety shields, guards, labels, and ground wires. Replace any safety device that is worn or defective.
- Reinstall all covers correctly before returning the machine to the customer.
- Fan louvers on the machine help to prevent the overheating of internal components. Do not obstruct fan louvers or cover them with labels or stickers.

Electrical safety

Observe the following rules when working on electrical equipments.

Important:
Use only approved tools and test equipments. Some hand tools have handles covered with a soft material that does not insulate you when working with live electrical currents.
Many customers have rubber floor mats near their machines that contain small conductive fibers to decrease electrostatic discharges. Do not use such kind of mat to protect yourself from electrical shock.

- Find the room emergency power-off (EPO) switch, disconnecting switch, or electrical outlet. If an electrical accident occurs, you can then operate the switch or unplug the power cord quickly.
- Do not work alone under hazardous conditions or near the equipment that has hazardous voltages.
- Disconnect all power before:
  - Performing a mechanical inspection
  - Working near power supplies
  - Removing or installing main units
- Before you start to work on the machine, unplug the power cord. If you cannot unplug it, ask the customer to power-off the wall box that supplies power to the machine, and to lock the wall box in the off position.
- If you need to work on a machine that has exposed electrical circuits, observe the following precautions:
  - Ensure that another person, familiar with the power-off controls, is near you.

    Attention: Another person must be there to switch off the power, if necessary.
  - Use only one hand when working with powered-on electrical equipment; keep the other hand in your pocket or behind your back.

    Attention: An electrical shock can occur only when there is a complete circuit. By observing the above rule, you may prevent a current from passing through your body.
  - When using testers, set the controls correctly and use the approved probe leads and accessories for that tester.
  - Stand on suitable rubber mats (obtained locally, if necessary) to insulate you from grounds such as metal floor strips and machine frames.

Observe the special safety precautions when you work with very high voltages; instructions for these precautions are in the safety sections of maintenance information. Be extremely careful when you measure the high voltages.

- Regularly inspect and maintain your electrical hand tools for safe operational condition.
- Do not use worn or broken tools and testers.
- Never assume that power has been disconnected from a circuit. First, check it to make sure that it has been powered off.

- Always look carefully for possible hazards in your work area. Examples of these hazards are moist floors, nongrounded power extension cables, power surges, and missing safety grounds.
- Do not touch live electrical circuits with the reflective surface of a plastic dental mirror. The surface is conductive; such touching can cause personal injury and machine damage.
- Do not service the following parts with the power on when they are removed from their normal operating places in a machine:
  - Power supply units
  - Pumps
  - Blowers and fans
  - Motor generators

  and similar units. (This practice ensures correct grounding of the units.)
- If an electrical accident occurs:
  - Use caution: do not become a victim yourself.
  - Switch off the power.
  - Send the victim to get medical aid.

Safety inspection guide

The purpose of this inspection guide is to assist you in identifying potential unsafe conditions. As each machine was designed and built, required safety items were installed to protect users and service personnel from injury. This guide addresses only those items. You should use good judgment to identify potential safety hazards due to attachment of non-Lenovo features or options not covered by this inspection guide.

If any unsafe conditions are present, you must determine how serious the apparent hazard could be and whether you can continue without first correcting the problem.

Consider these conditions and the safety hazards they present:

- Electrical hazards, especially primary power (primary voltage on the frame can cause serious or fatal electrical shock)
- Explosive hazards, such as a damaged CRT face or a bulging capacitor
- Mechanical hazards, such as loose or missing hardware

To determine whether there are any potential unsafe conditions, use the following checklist at the beginning of every service task. Begin the checks with the power off, and the power cord disconnected.

Checklist:

1. Check exterior covers for damage (loose, broken, or sharp edges).
2. Turn off the computer. Disconnect the power cord.
3. Check the power cord for:
   a. A third-wire ground connector in good condition. Use a meter to measure third-wire ground continuity for 0.1 ohm or less between the external ground pin and the frame ground.
   b. The power cord should be the type specified in the parts list.
   c. Insulation must not be frayed or worn.
4. Check for cracked or bulging batteries.
5. Remove the cover.
6. Check for any obvious non-Lenovo alterations. Use good judgment as to the safety of any non-Lenovo alterations.
7. Check inside the unit for any obvious unsafe conditions, such as metal filings, contamination, water or other liquids, or signs of fire or smoke damage.
8. Check for worn, frayed, or pinched cables.
9. Check that the power-supply cover fasteners (screws or rivets) have not been removed or tampered with.

Handling devices that are sensitive to electrostatic discharge

Any computer part containing transistors or integrated circuits (ICs) should be considered sensitive to electrostatic discharge (ESD). ESD damage can occur when there is a difference in charge between objects. Protect against ESD damage by equalizing the charge so that the machine, the part, the work mat, and the person handling the part are all at the same charge.

Notes:
1. Use product-specific ESD procedures when they exceed the requirements noted here.
2. Make sure that the ESD protective devices you use have been certified (ISO 9000) as fully effective.

When handling ESD-sensitive parts:
- Keep the parts in protective packages until they are inserted into the product.
- Avoid contact with other people.
- Wear a grounded wrist strap against your skin to eliminate static on your body.
- Prevent the part from touching your clothing. Most clothing is insulative and retains a charge even when you are wearing a wrist strap.
- Use the black side of a grounded work mat to provide a static-free work surface. The mat is especially useful when handling ESD-sensitive devices.
- Select a grounding system, such as those listed below, to provide protection that meets the specific service requirement.

Notes:
The use of a grounding system to guard against ESD damage is desirable but not necessary.

- Attach the ESD ground clip to any frame ground, ground braid, or green-wire ground.
- When working on a double-insulated or battery-operated system, use an ESD common ground or reference point. You can use coax or connector-outside shells on these systems.
- Use the round ground prong of the ac plug on ac-operated computers.

Grounding requirements

Electrical grounding of the computer is required for operator safety and correct system function. Proper grounding of the electrical outlet can be verified by a certified electrician.

Safety notices: multilingual translations

The safety notices in this section are provided in English, French, German, Hebrew, Italian, Japanese, and Spanish.

Safety notice 1

Before the computer is powered on after FRU replacement, make sure all screws, springs, and other small parts are in place and are not left loose inside the computer. Verify this by shaking the computer and listening for rattling sounds. Metallic parts or metal flakes can cause electrical shorts.

Avant de remettre l'ordinateur sous tension après remplacement d'une unité en clientèle, vérifiez que tous les ressorts, vis et autres pièces sont bien en place et bien fixées. Pour ce faire, secouez l'unité et assurez-vous qu'aucun bruit suspect ne se produit. Des pièces métalliques ou des copeaux de métal pourraient causer un court-circuit.

Bevor nach einem FRU-Austausch der Computer wieder angeschlossen wird, muß sichergestellt werden, daß keine Schrauben, Federn oder andere Kleinteile fehlen oder im Gehäuse vergessen wurden. Der Computer muß geschüttelt und auf Klappergeräusche geprüft werden. Metallteile oder-splitter können Kurzschlüsse erzeugen.

לפני הפעלת המחשב לאחר החלפת FRU יש לוודא
שכל הברגים, הקפיצים, וחלקים קטנים אחרים נמצאים
במקומם ואינם חופשיים לזוז בתוך המחשב. כדי לוודא
זאת, יש לטלטל את המחשב ולהקשיב לגילוי קולות שקשוק.
חלקי או שבבי מתכת עלולים לגרום לקצרים חשמליים.

Prima di accendere l'elaboratore dopo che é stata effettuata la sostituzione di una FRU, accertarsi che tutte le viti, le molle e tutte le altri parti di piccole dimensioni siano nella corretta posizione e non siano sparse all'interno dell'elaboratore. Verificare ciò scuotendo l'elaboratore e prestando attenzione ad eventuali rumori; eventuali parti o pezzetti metallici possono provocare cortocircuiti pericolosi.

FRU の交換後、コンピュータの電源を入れる前に、ねじ、バネ、その他の小さな部品がすべて正しい位置にあり、またコンピュータの内部で緩んでいないことを確認してください。
これを確認するには、コンピュータを振って、カチャカチャと音がしないか確かめます。金属部品や金属破片はショートの原因になることがあります。

Antes de encender el sistema despues de sustituir una FRU, compruebe que todos los tornillos, muelles y demás piezas pequeñas se encuentran en su sitio y no se encuentran sueltas dentro del sistema. Compruébelo agitando el sistema y escuchando los posibles ruidos que provocarían. Las piezas metálicas pueden causar cortocircuitos eléctricos.

Safety notice 2

⚠ DANGER

Some standby batteries contain a small amount of nickel and cadmium. Do not disassemble a standby battery, recharge it, throw it into fire or water, or short-circuit it. Dispose of the battery as required by local ordinances or regulations. Use only the battery in the appropriate parts listing. Use of an incorrect battery can result in ignition or explosion of the battery.

Certaines batteries de secours contiennent du nickel et du cadmium. Ne les démontez pas, ne les rechargez pas, ne les exposez ni au feu ni à l’eau. Ne les mettez pas en court-circuit. Pour les mettre au rebut, conformez-vous à la réglementation en vigueur. Lorsque vous remplacez la pile de sauvegarde ou celle de l’horloge temps réel, veillez à n’utiliser que les modèles cités dans la liste de pièces détachées adéquate. Une batterie ou une pile inappropriée risque de prendre feu ou d’exploser.

Die Bereitschaftsbatterie, die sich unter dem Diskettenlaufwerk befindet, kann geringe Mengen Nickel und Cadmium enthalten. Sie darf nicht zerlegt, wiederaufgeladen, kurzgeschlossen, oder Feuer oder Wasser ausgesetzt werden. Bei der Entsorgung die örtlichen Bestimmungen für Sondermüll beachten. Beim Ersetzen der Bereitschafts-oder Systembatterie nur Batterien des Typs verwenden, der in der Ersatzteilliste aufgeführt ist. Der Einsatz falscher Batterien kann zu Entzündung oder Explosion führen.

סוללות המתנה מסוימות מכילות כמות קטנה של ניקל וקדמיום. אין לפרק סוללת המתנה, לטעון אותה מחדש, להשליך אותה לאש או למים או לקצר אותה. יש לסלק את הסוללה כנדרש על ידי התקנות והחוקים המקומיים. יש להשתמש רק בסוללה המופיעה ברשימת החלקים המתאימה. שימוש בסוללה לא מתאימה עלול לגרום להצתה או התפוצצות של הסוללה.

Alcune batterie di riserva contengono una piccola quantità di nichel e cadmio. Non smontarle, ricaricarle, gettarle nel fuoco o nell’acqua né cortocircuitarle. Smaltirle secondo la normativa in vigore (DPR 915/82, successive disposizioni e disposizioni locali). Quando si sostituisce la batteria dell’RTC (real time clock) o la batteria di supporto, utilizzare soltanto i tipi inseriti nell’appropriato Catalogo parti. L’impiego di una batteria non adatta potrebbe determinare l’incendio o l’esplosione della batteria stessa.

予備バッテリーの中には少量のニッケルとカドミウムが含まれているものがあります。したがって、予備バッテリーの分解、再充電、火または水の中への投棄、またはショートさせることは決して行わないでください。バッテリーを廃棄する場合は地方自治体の条例に従ってください。適切なパーツ・リストにあるバッテリーだけを使用してください。誤ったバッテリーを使用すると、バッテリーが発火したり、爆発したりすることがあります。

Algunas baterías de reserva contienen una pequeña cantidad de níquel y cadmio. No las desmonte, ni recargue, ni las eche al fuego o al agua ni las cortocircuite. Deséchelas tal como dispone la normativa local. Utilice sólo baterías que se encuentren en la lista de piezas. La utilización de una batería no apropiada puede provocar la ignición o explosión de la misma.

Safety notice 3

⚠ DANGER

The battery pack contains small amounts of nickel. Do not disassemble it, throw it into fire or water, or short-circuit it. Dispose of the battery pack as required by local ordinances or regulations. Use only the battery in the appropriate parts listing when replacing the battery pack. Use of an incorrect battery can result in ignition or explosion of the battery.

La batterie contient du nickel. Ne la démontez pas, ne l'exposez ni au feu ni à l'eau. Ne la mettez pas en court-circuit. Pour la mettre au rebut, conformez-vous à la réglementation en vigueur. Lorsque vous remplacez la batterie, veillez à n'utiliser que les modèles cités dans la liste de pièces détachées adéquate. En effet, une batterie inappropriée risque de prendre feu ou d'exploser.

Akkus enthalten geringe Mengen von Nickel. Sie dürfen nicht zerlegt, wiederaufgeladen, kurzgeschlossen, oder Feuer oder Wasser ausgesetzt werden. Bei der Entsorgung die örtlichen Bestimmungen für Sondermüll beachten. Beim Ersetzen der Batterie nur Batterien des Typs verwenden, der in der Ersatzteilliste aufgeführt ist. Der Einsatz falscher Batterien kann zu Entzündung oder Explosion führen.

מארז הסוללה מכיל כמות קטנה של ניקל וקדמיום. אין לפרק את מארז הסוללה, להשליך אותו לאש או למים או לקצר אותו. יש לסלק את מארז הסוללה הסוללה כנדרש על ידי התקנות והחוקים המקומיים. יש להשתמש רק בסוללה המופיעה ברשימת החלקים המתאימה בזמן החלפת מארז הסוללה. שימוש בסוללה לא מתאימה עלול לגרום להצתה או התפוצצות של הסוללה.

La batteria contiene piccole quantità di nichel. Non smontarla, gettarla nel fuoco o nell'acqua né cortocircuitarla. Smaltirla secondo la normativa in vigore (DPR 915/82, successive disposizioni e disposizioni locali). Quando si sostituisce la batteria, utilizzare soltanto i tipi inseriti nell'appropriato Catalogo parti. L'impiego di una batteria non adatta potrebbe determinare l'incendio o l'esplosione della batteria stessa.

バッテリー・パックには少量のニッケルが含まれています。バッテリー・パックを分解したり、火または水の中に投げ込んだり、ショートさせないでください。バッテリー・パックの廃棄にあたっては、地方自治体の条例または規則に従ってください。バッテリー・パックを交換するときは、適切なパーツ・リストにあるバッテリーだけを使用してください。誤ったバッテリーを使用すると、バッテリーが発火したり、爆発したりすることがあります。

Las baterías contienen pequeñas cantidades de níquel. No las desmonte, ni recargue, ni las eche al fuego o al agua ni las cortocircuite. Deséchelas tal como dispone la normativa local. Utilice sólo baterías que se encuentren en la lista de piezas al sustituir la batería. La utilización de una batería no apropiada puede provocar la ignición o explosión de la misma.

Safety notice 4

⚠ DANGER

The lithium battery can cause a fire, an explosion, or a severe burn. Do not recharge it, remove its polarized connector, disassemble it, heat it above 100°C (212°F), incinerate it, or expose its cell contents to water. Dispose of the battery as required by local ordinances or regulations. Use only the battery in the appropriate parts listing. Use of an incorrect battery can result in ignition or explosion of the battery.

La pile de sauvegarde contient du lithium. Elle présente des risques d'incendie, d'explosion ou de brûlures graves. Ne la rechargez pas, ne retirez pas son connecteur polarisé et ne la démontez pas. Ne l'exposez pas à une temperature supérieure à 100°C, ne la faites pas brûler et n'en exposez pas le contenu à l'eau. Mettez la pile au rebut conformément à la réglementation en vigueur. Une pile inappropriée risque de prendre feu ou d'exploser.

Die Systembatterie ist eine Lithiumbatterie. Sie kann sich entzünden, explodieren oder schwere Verbrennungen hervorrufen. Batterien dieses Typs dürfen nicht aufgeladen, zerlegt, über 100 C erhitzt oder verbrannt werden. Auch darf ihr Inhalt nicht mit Wasser in Verbindung gebracht oder der zur richtigen Polung angebrachte Verbindungsstecker entfernt werden. Bei der Entsorgung die örtlichen Bestimmungen für Sondermüll beachten. Beim Ersetzen der Batterie nur Batterien des Typs verwenden, der in der Ersatzteilliste aufgeführt ist. Der Einsatz falscher Batterien kann zu Entzündung oder Explosion führen.

סוללת הליתיום עלולה לגרום לשריפה, להתפוצצות או לכוויות קשות. אין לטעון אותה מחדש, לסלק את המחבר המקוטב שלה, לפרק אותה או לחמם אותה לטמפרטורה העולה על 100 מעלות צלזיוס. אין לשרוף את הסוללה ואין לחשוף את תוכן התא למים. יש לסלק את הסוללה כנדרש בתקנות ובחוקים המקומיים. יש להשתמש רק בסוללה המופיעה ברשימת החלקים המתאימים. שימוש בסוללה אחרת עלול לגרום לסכנת שריפה או התפוצצות.

La batteria di supporto e una batteria al litio e puo incendiarsi, esplodere o procurare gravi ustioni. Evitare di ricaricarla, smontarne il connettore polarizzato, smontarla, riscaldarla ad una temperatura superiore ai 100 gradi centigradi, incendiarla o gettarla in acqua. Smaltirla secondo la normativa in vigore (DPR 915/82, successive disposizioni e disposizioni locali). L'impiego di una batteria non adatta potrebbe determinare l'incendio o l'esplosione della batteria stessa.

リチウム・バッテリーは、火災、爆発、または重症のやけどを引き起こすことがあります。バックアップ・バッテリーの充電、その極性コネクターの取り外し、バッテリー本体の分解、
100 ℃ (212 ˚F) 以上への加熱、焼却、電池の中身を水に浸すことはしないでください。バッテリーを廃棄する場合は地方自治体の条例に従ってください。適切なパーツ・リストにあるバッテリーだけを使用してください。誤ったバッテリーを使用すると、バッテリーが発火したり、爆発したりすることがあります。

La batería de repuesto es una batería de litio y puede provocar incendios, explosiones o quemaduras graves. No la recargue, ni quite el conector polarizado, ni la desmonte, ni caliente por encima de los 100°C (212°F), ni la incinere ni exponga el contenido de sus celdas al agua. Deséchela tal como dispone la normativa local.

Safety notice 5

If the LCD breaks and the fluid from inside the LCD gets into your eyes or on your hands, immediately wash the affected areas with water at least for 15 minutes. Seek medical care if any symptoms caused by the fluid are present after washing.

Si le panneau d’affichage à cristaux liquides se brise et que vous recevez dans les yeux ou sur les mains une partie du fluide, rincez-les abondamment pendant au moins quinze minutes. Consultez un médecin si des symptômes persistent après le lavage.

Die Leuchtstoffröhre im LCD-Bildschirm enthält Quecksilber. Bei der Entsorgung die örtlichen Bestimmungen für Sondermüll beachten. Der LCD-Bildschirm besteht aus Glas und kann zerbrechen, wenn er unsachgemäß behandelt wird oder der Computer auf den Boden fällt. Wenn der Bildschirm beschädigt ist und die darin befindliche Flüssigkeit in Kontakt mit Haut und Augen gerät, sollten die betroffenen Stellen mindestens 15 Minuten mit Wasser abgespült und bei Beschwerden anschließend ein Arzt aufgesucht werden.

אם מסך הגביש הנוזלי (LCD) נשבר והנוזל מתוך המסך בא במגע עם עיניכם או ידיכם, שטפו את האזורים הנגועים מיד במים במשך 15 דקות לפחות. פנו לקבלת עזרה רפואית אם תסמינים הנובעים מהמגע עם הנוזל נמשכים לאחר השטיפה.

Nel caso che caso l’LCD si dovesse rompere ed il liquido in esso contenuto entrasse in contatto con gli occhi o le mani, lavare immediatamente le parti interessate con acqua corrente per almeno 15 minuti; poi consultare un medico se i sintomi dovessero permanere.

LCDが破損し、LCDの中の液体が目に入ったり、手に触れたりした場合は、液体が触れた部分を少なくとも15分間洗い流してください。洗い流した後に、液体によって何らかの症状が現れた場合は、医師の治療を受けてください。

Si la LCD se rompe y el fluido de su interior entra en contacto con sus ojos o sus manos, lave inmediatamente las áreas afectadas con agua durante 15 minutos como mínimo. Obtenga atención medica si se presenta algún

Safety notice 6

⚠ DANGER

To avoid shock, do not remove the plastic cover that protects the lower part of the inverter card.

Afin d’éviter tout risque de choc électrique, ne retirez pas le cache en plastique protégeant la partie inférieure de la carte d’alimentation.

Aus Sicherheitsgründen die Kunststoffabdeckung, die den unteren Teil der Spannungswandlerplatine umgibt, nicht entfernen.

כדי למנוע התחשמלות, אין להסיר את מכסה הפלסטיק המגן על חלקו התחתון של הכרטיס ההפוך.

Per evitare scosse elettriche, non rimuovere la copertura in plastica che avvolge la parte inferiore della scheda invertitore.

感電を防ぐため、インバーター・カードの下部を保護しているプラスチック・カバーを外さないでください。

Para evitar descargas, no quite la cubierta de plástico que rodea la parte baja de la tarjeta invertida.

Safety notice 7

⚠ DANGER

Though the main batteries have low voltage, a shorted or grounded battery can produce enough current to burn personnel or combustible materials.

Bien que le voltage des batteries principales soit peu élevé, le court-circuit ou la mise à la masse d’une batterie peut produire suffisamment de courant pour brûler des matériaux combustibles ou causer des brûlures corporelles graves.

Obwohl Hauptbatterien eine niedrige Spannung haben, können sie doch bei Kurzschluß oder Erdung genug Strom abgeben, um brennbare Materialien zu entzünden oder Verletzungen bei Personen hervorzurufen.

אף שהסוללות הראשיות הן בעלות מתח נמוך, סוללה מקוצרת או מוארקת עלולה להפיק זרם מספיק לגרימת כוויות או להצתת חומרים דליקים.

Sebbene le batterie di alimentazione siano a basso voltaggio, una batteria in corto circuito o a massa può fornire corrente sufficiente da bruciare materiali combustibili o provocare ustioni ai tecnici di manutenzione.

メイン・バッテリーの電圧は低くても、ショートしたり、接地したバッテリーが、作業者にやけどを負わせたり、可燃物を燃やすだけの電流を発生させる場合があります。

Aunque las baterías principales tienen un voltaje bajo, una batería cortocircuitada o con contacto a tierra puede producir la corriente suficiente como para quemar material combustible o provocar quemaduras en el personal.

Safety notice 8

⚠ DANGER

Before removing any FRU, turn off the computer, unplug all power cords from electrical outlets, remove the battery pack, and then disconnect any interconnecting cables.

Avant de retirer une unité remplaçable en clientèle, mettez le système hors tension, débranchez tous les cordons d’alimentation des socles de prise de courant, retirez la batterie et déconnectez tous les cordons d’interface.

Die Stromzufuhr muß abgeschaltet, alle Stromkabel aus der Steckdose gezogen, der Akku entfernt und alle Verbindungskabel abgenommen sein, bevor eine FRU entfernt wird.

לפני סילוק FRU כלשהו, יש לכבות את המחשב, לנתק את כל כבלי החשמל משקעי החשמל, להוציא את מארז הסוללה, ואז לנתק כבלי חיבור אחרים אם יש כאלה.

Prima di rimuovere qualsiasi FRU, spegnere il sistema, scollegare dalle prese elettriche tutti i cavi di alimentazione, rimuovere la batteria e poi scollegare i cavi di interconnessione.

FRU を取り外す前に、 ThinkPad の電源を切って、すべての電源コードをコンセントから外してください。次に、バッテリー・パックを外し、相互接続ケーブルを外してください。

Antes de quitar una FRU, apague el sistema, desenchufe todos los cables de las tomas de corriente eléctrica, quite la batería y, a continuación, desconecte cualquier cable de conexión entre dispositivos.

Laser compliance statement

Some models of Lenovo computer are equipped from the factory with an optical storage device such as a CD-ROM drive or a DVD-ROM drive. Such devices are also sold separately as options. If one of these drives is installed, it is certified in the U.S. to conform to the requirements of the Department of Health and Human Services 21 Code of Federal Regulations (DHHS 21 CFR) Subchapter J for Class 1 laser products. Elsewhere, the drive is certified to conform to the requirements of the International Electrotechnical Commission (IEC) 825 and CENELEC EN 60 825 for Class 1 laser products.

If a CD-ROM drive, a DVD-ROM drive, or another laser device is installed, note the following:

⚠ **CAUTION**

Use of controls or adjustments or performance of procedures other than those specified herein might result in hazardous radiation exposure.

O uso de controles, ajustes ou desempenho de procedimentos diferentes daqueles aqui especificados pode resultar em perigosa exposição à radiação.

凡未在这里指明的任何控制用法、调整、行为，都会导致严重后果。

Pour éviter tout risque d’exposition au rayon laser, respectez les consignes de réglage et d’utilisation des commandes, ainsi que les procédures décrites.

Werden Steuer- und Einstellelemente anders als hier festgesetzt verwendet, kann gefährliche Laserstrahlung auftreten.

Az itt előírt eljárásoktól, beállításoktól és vezérlésektől eltérni a lézersugárzás veszélye miatt kockázatos !

L’utilizzo di controlli, regolazioni o l’esecuzione di procedure diverse da quelle specificate possono provocare l’esposizione a.

Использование элементов настройки и выполнение процедур иных, чем указано здесь, может привести к опасному радиационному облучению.

Použitie kontrôl, úprav alebo iných vykonaní od iných výrobcov, ako je v tomto špecifikované, mohlo by mať za následok nebezpečenstvo vystavenia sa vyžiarovaniu.

本書で指定された内容以外の、お客様による整備、調整、または手順を行った場合、レーザー光の放射の危険があります。

El uso de controles o ajustes o la ejecución de procedimientos distintos de los aquí especificados puede provocar la exposición a radiaciones peligrosas.

Opening the CD-ROM drive, the DVD-ROM drive, or any other optical storage device could result in exposure to hazardous laser radiation. There are no serviceable parts inside those drives. **Do not open**.

A CD-ROM drive, a DVD-ROM drive, or any other storage device installed may contain an embedded Class 3A or Class 3B laser diode. Note the following:

⚠ DANGER

Emits visible and invisible laser radiation when open. Do not stare into the beam, do not view directly with optical instruments, and avoid direct exposure to the beam.

Radiação por raio laser ao abrir. Não olhe fixo no feixe de luz, não olhe diretamente por meio de instrumentos óticos e evite exposição direta com o feixe de luz.

开启时会有激光发射时，请勿盯视激光光束，请勿直接查看视觉仪器，并且避免直接接触在激光光束之中。

Rayonnement laser si carter ouvert. Évitez de fixer le faisceau, de le regarder directement avec des instruments optiques, ou de vous exposer au rayon.

Laserstrahlung bei geöffnetem Gerät. Nicht direkt oder über optische Instrumente in den Laserstrahl sehen und den Strahlungsbereich meiden.

Kinyitáskor lézersugár ! Ne nézzen bele se szabad szemmel, se optikai eszközökkel. Kerülje a sugárnyalábbal való érintkezést!

Aprendo l’unità vengono emesse radiazioni laser. Non fissare il fascio, non guardarlo direttamente con strumenti ottici e evitare l’esposizione diretta al fascio.

Открывая, берегитесь лазерного излучения. Не смотрите на луч, не разглядывайте его с помощью оптических инструментов, а также избегайте прямого воздействия лазерного луча.

Keď je laserová jednotka otvorená. Vyhnite sa priamemu pohľadu a nehľadte priamo s optickými nástrojmi do ľúča a vyhnite sa priamemu vystaveniu ľúčov.

開けるとレーザー光が放射されます。光線を見つめたり、光学機械を使って直接見たりしないでください。

Radiación láser al abrir. No mire fijamente ni examine con instrumental óptico el haz de luz. Evite la exposición directa al haz.

Important service information

This chapter presents the following important service information:

- see “Strategy for replacing FRUs” on page 16
  - see “Strategy for replacing a hard disk drive” on page 17
  - see “Important notice for replacing a system board” on page 17
- see “Important information about replacing RoHS compliant FRUs” on page 18

Important:
BIOS and device driver fixes are customer-installable. The BIOS and device drivers are posted on the customer support site: http://consumersupport.lenovo.com/.

Strategy for replacing FRUs

Before replacing parts:

Make sure that all software fixes, drivers, and BIOS downloads are installed before replacing any FRUs listed in this manual.

After a system board is replaced, ensure that the latest BIOS is loaded to the system board before completing the service action.

To download software fixes, drivers, and BIOS, follow the steps below:

1. Go to http://consumersupport.lenovo.com/.
2. Enter the serial number or select a product or use Lenovo smart downloading.
3. Select the BIOS/Driver/Applications and download.
4. Follow the directions on the screen and install the necessary software.

Use the following strategy to prevent unnecessary expense for replacing and servicing FRUs:

- If you are instructed to replace an FRU, but the replacement does not solve the problem, reinstall the original FRU before you continue.
- Some computers have both a processor board and a system board. If you are instructed to replace either of them, and replacing one of them does not solve the problem, reinstall that board, and then replace the other one.
- If an adapter or a device consists of more than one FRU, any of the FRUs may be the cause of the error. Before replacing the adapter or device, remove the FRUs one by one to see if the symptoms change. Replace only the FRU that changed the symptoms.

Attention: The setup configuration on the computer you are servicing may have been customized. Running Automatic Configuration may alter the settings. Note the current configuration settings (using the View Configuration option); then, when service has been completed, verify that those settings remain in effect.

Strategy for replacing a hard disk drive

Always try to run a low-level format before replacing a hard disk drive. This will cause all customer data on the hard disk to be lost. Make sure that the customer has a current backup of the data before performing this action.

Attention: The drive startup sequence in the computer you are servicing may have been changed. Be extremely careful during write operations such as copying, saving, or formatting. If you select an incorrect drive, data or programs can be overwritten.

Important notice for replacing a system board

Some components mounted on a system board are very sensitive. Improper handling can cause damage to those components, and may cause a system malfunction.

Attention: When handling a system board:

- Do not drop the system board or apply any excessive force to it.
- Avoid rough handling of any kind.
- Avoid bending the system board and hard pushing to prevent cracking at each BGA (Ball Grid Array) chipset.

Important information about replacing RoHS compliant FRUs

RoHS, The Restriction of Hazardous Substances in Electrical and Electronic Equipment Directive (2002/95/EC) is a European Union legal requirement affecting the global electronics industry. RoHS requirements must be implemented on Lenovo products placed on the market after June 2006. Products on the market before June 2006 are not required to have RoHS compliant parts. If the original FRU parts are non-compliant, replacement parts can also be non-compliant. In all cases if the original FRU parts are RoHS compliant, the replacement part must also be RoHS compliant.

Note: RoHS and non-RoHS FRU part numbers with the same fit and function are identified with unique FRU part numbers.

Lenovo plans to transit to RoHS compliance well before the implementation date and expects its suppliers to be ready to support Lenovo's requirements and schedule in the EU. Products sold in 2005 and 2006 will contain some RoHS compliant FRUs. The following statement pertains to these products and any product Lenovo produces containing RoHS compliant FRUs.

RoHS compliant FRUs have unique FRU part numbers. Before or after the RoHS implementation date, failed RoHS compliant parts must always be replaced with RoHS compliant ones, so only the FRUs identified as compliant in the system HMM or direct substitutions for those FRUs may be used.

Products marketed before June 2006		Products marketed after June 2006	
Current or original part	**Replacement FRU**	**Current or original part**	**Replacement FRU**
Non-RoHS	Can be Non-RoHS	Must be RoHS	Must be RoHS
Non-RoHS	Can be RoHS		
Non-RoHS	Can sub to RoHS		
RoHS	Must be RoHS		

Note: A direct substitution is a part with a different FRU part number that is automatically shipped by the distribution center at the time of the order.

General checkout

This chapter presents the following information:

- see "What to do first" on page 20
- see "Power system checkout" on page 21

Before you go to the checkout, make sure to read the following important notes:

Important notes:

- **Only certified trained personnel can service the computer.**
- **Before replacing any FRU, read the entire page on removing and replacing FRUs.**
- **Carefully remove screws for reuse when replacing FRUs.**
- **Be extremely careful during such write operations as copying, saving, or formatting.** Drives in the computer that you are servicing sequence might have been altered. If you select an incorrect drive, data or programs might be overwritten.
- **Replace an FRU only with another FRU of the correct model.** When you replace an FRU, make sure that the machine model and the FRU part number are correct by referring to the FRU parts list.
- **An FRU should not be replaced just because of a single, unreproducible failure.** Single failures can occur for a variety of reasons that have nothing to do with a hardware defect, such as cosmic radiation, electrostatic discharge, or software errors. Consider replacing an FRU only when a problem recurs. If you suspect that an FRU is defective, clear the error logs and run the test again. If the error does not recur, do not replace the FRU.
- **Be careful not to replace a nondefective FRU.**

What to do first

When you do return an FRU, you must include the following information in the parts exchange form or parts return form that you attach to it:

1. Name and phone number of servicer
2. Date of service
3. Date on which the machine failed
4. Date of purchase
5. Procedure index and page number in which the failing FRU was detected
6. Failing FRU name and part number
7. Machine type, model number, and serial number
8. Customer's name and address

Note for warranty: During the warranty period, the customer may be responsible for repair costs if the computer damage was caused by misuse, accident, modification, unsuitable physical or operating environment, or improper maintenance by the customer.

The following is a list of some common items that are not covered under warranty and some symptoms that might indicate that the system was subjected to stress beyond normal use.

Before checking problems with the computer, determine whether the damage is covered under the warranty by referring to the following list:

The following are not covered under warranty:

- LCD panel cracked from the application of excessive force or from being dropped
- Scratched (cosmetic) parts
- Distortion, deformation, or discoloration of the cosmetic parts
- Plastic parts, latches, pins, or connectors that have been cracked or broken by excessive force
- Damage caused by liquid spilled into the system
- Damage caused by the improper insertion of a PC Card or the installation of an incompatible card
- Improper disk insertion or use of an optical drive
- Diskette drive damage caused by pressure on the diskette drive cover, foreign material in the drive, or the insertion of a diskette with multiple labels
- Damaged or bent diskette eject button
- Fuses blown by attachment of a nonsupported device
- Forgotten computer password (making the computer unusable)
- Sticky keys caused by spilling a liquid onto the keyboard
- Use of an incorrect AC adapter on laptop products

The following symptoms might indicate damage caused by nonwarranted activities:

- Missing parts might be a symptom of unauthorized service or modification.
- If the spindle of a hard disk drive becomes noisy, it may have been subjected to excessive force, or dropped.

Power system checkout

To verify a symptom, follow the steps below:

1. Turn off the computer.
2. Remove the battery pack.
3. Connect the AC adapter.
4. Make sure that power is supplied when you turn on the computer.
5. Turn off the computer.
6. Disconnect the AC adapter and install the charged battery pack.
7. Make sure that the battery pack supplies power when you turn on the computer.

If you suspect a power problem, see the appropriate one of the following power supply checkouts:

- see “Checking the AC adapter” on page 21
- see “Checking operational charging” on page 21
- see “Checking the battery pack” on page 22

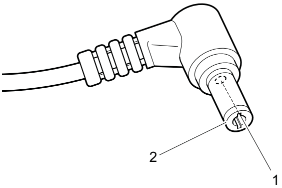
Checking the AC adapter

You are here because the computer fails only when the AC adapter is used.

- If the power-on indicator does not turn on, check the power cord of the AC adapter for correct continuity and installation.
- If the computer does not charge during operation, go to “Checking operational charging”.

To check the AC adapter, follow the steps below:

1. Unplug the AC adapter cable from the computer.
2. Measure the output voltage at the plug of the AC adapter cable. See the following figure:



Pin	Voltage (V DC)
1	+20
2	0

Note: Output voltage for the AC adapter pin No. 2 may differ from the one you are servicing.

3. If the voltage is not correct, replace the AC adapter.
4. If the voltage is acceptable, do the following:

- Replace the system board.
- If the problem persists, go to see “Lenovo IdeaPad Y410p/Y510p” on page 27.

Note: Noise from the AC adapter does not always indicate a defect.

Checking operational charging

To check whether the battery charges properly during operation, use a discharged battery pack or a battery pack that has less than 50% of the total power remaining when installed in the computer.

Perform operational charging. If the battery status indicator or icon does not light on, remove the battery pack and let it return to room temperature. Reinstall the battery pack. If the charge indicator or icon is still off, replace the battery pack.

If the charge indicator still does not light on, replace the system board. Then reinstall the battery pack. If it is still not charged, go to the next section.

Checking the battery pack

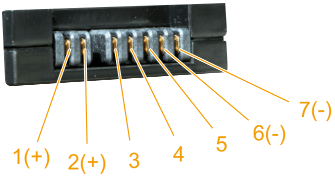
Battery charging does not start until the Power Meter shows that less than 95% of the total power remains; under this condition the battery pack can charge to 100% of its capacity. This protects the battery pack from being overcharged or from having a shortened life.

To check your battery, move your cursor to the Power Meter icon in the icon tray of the Windows® taskbar and wait for a moment (but do not click it), and the percentage of battery power remaining is displayed. To get detailed information about the battery, double-click the Power Meter icon.

Note: If the battery pack becomes hot, it may not be able to be charged. Remove it from the computer and leave it at room temperature for a while. After it cools down, reinstall and recharge it.

To check the battery pack, follow the steps below:

1. Turn off the computer.
2. Remove the battery pack and measure the voltage between battery terminals 1 (+) and 7 (-). See the following figure:



Terminal	Voltage (V DC)
1	+0 to +14
7	Ground (-)

3. If the voltage is less than +11.0 V DC, the battery pack has been discharged.
   Note: Recharging will be continued for at least 3 hours, even though the indicator does not light on.
   If the voltage is still less than +11.0 V DC after recharging, replace the battery.
4. If the voltage is more than +11.0 V DC, measure the resistance between battery terminals 5 and 7. The resistance must be 4 to 30 KΩ.
   If the resistance is not correct, replace the battery pack. If the resistance is correct, replace the system board.

Related service information

This chapter presents the following information:

- see “Restoring the factory contents by using Recovery Disc Set” on page 23
- see “Passwords” on page 24
- see “Power management” on page 25

Restoring the factory contents by using Recovery Disc Set

When the hard disk drive or solid state drive is replaced because of a failure, no product recovery program is on the new drive. In this case, you must use the *Recovery Disc Set* for the computer. Order the *Recovery Disc Set* and the drive at the same time so that you can recover the new drive with the pre-installed software when they arrive.

The *Recovery Disc Set* consists of the following set of DVDs to restore the computer to the original factory configuration.

Start Recovery Disc (one disc)

This disc is used to format the hard disk drive and initiate the recovery process.

Operating System Recovery Disc (one or more discs)

This disc restores the Microsoft Windows operating system.

Applications and Drivers Recovery Disc (one or more discs)

This disc restores the pre-installed applications and drivers on the computer.

Supplemental Recovery Disc

This disc contains additional content, such as software for specific models and updates to the software that was preloaded on the computer. Not all recovery disc sets come with a *Supplemental Recovery Disc*.

To restore the computer to the original factory configuration using the recovery disc set, do the following:

1. Insert the bootable *Start Recovery Disc* into the optical drive.
2. Start the computer. When the Lenovo logo comes up, immediately press F12; on the boot sequence menu, select the optical drive as the first boot-up device. The computer will boot from the *Start Recovery Disc*. Follow the on-screen instructions to begin the recovery process.
3. Read the license. If you agree with the terms, select **I accept these terms and conditions** and then click **Next**.
4. Insert the **Operating System Recovery Disc** when prompted and click **Yes** to begin the operating system recovery process.
5. Insert the *Applications and Drivers Recovery Disc* when prompted and then click **OK** to begin the applications and drivers recovery process.
6. If you have a *Supplemental Recovery Disc*, insert it when prompted and click **Yes**. If you do not have a *Supplemental Recovery Disc*, click **No**.

7. When all of the data has been copied from the last disc in the set, remove the disc and restart the computer.

> **Note:** The remainder of the recovery process is fully automated and no action is required by you. The computer will restart into the Windows desktop several times and you might experience periods when no activity is apparent on the screen for several minutes at a time. This is normal.

8. When the recovery process is complete, the Welcome to the Microsoft Windows screen is displayed. Follow the instructions on the screen to complete the Windows setup.

Passwords

As many as three passwords may be needed for any Lenovo computer: the power-on password (POP), the hard disk password (HDP), and the supervisor password (SVP).

If any of these passwords has been set, a prompt for it appears on the screen whenever the computer is turned on. The computer does not start until the password is entered.

Exception: If only an SVP is installed, the password prompt does not appear when the operating system is booted.

Power-on password

A power-on password (POP) protects the system from being powered on by an unauthorized person. The password must be entered before an operating system can be booted.

Hard-disk password

There are two hard-disk passwords (HDPs):

+ User HDP - for the user

+ Master HDP - for the system administrator, who can use it to get access to the hard disk drive even if the user has changed the user HDP

Attention: If the user HDP has been forgotten, check whether a master HDP has been set. If it has, it can be used for access to the hard disk drive. If no master HDP is available, neither Lenovo nor Lenovo authorized service technicians provide any services to reset either the user or the master HDP, or to recover data from the hard disk drive. The hard disk drive can be replaced for a scheduled fee.

Supervisor password

A supervisor password (SVP) protects the system information stored in the BIOS Setup Utility. The user must enter the SVP in order to get access to the BIOS Setup Utility and change the system configuration.

Attention: If the SVP has been forgotten and cannot be made available to the servicer, there is no service procedure to reset the password. The system board must be replaced for a scheduled fee.

Power management

Note: Power management modes are not supported for APM operating system.

To reduce power consumption, the computer has three power management modes: screen blank, sleep (standby), and hibernation.

Screen blank mode

If the time set on the “Turn off monitor” timer in the operating system expires, the LCD backlight turns off. You can also turn off the LCD backlight by pressing Fn+F2.

To end screen blank mode and resume normal operation, press any key.

Putting your computer to sleep

If you will be away from your computer for only a short time, put the computer to sleep.

When the computer is in sleep mode, you can quickly wake it to resume use, bypassing the startup process.

To put the computer to sleep, do one of the following:

- Close the display panel.
- Press the power button.
- Open the charms and then select **Settings** ⚙ → **Power** ⏻ → **Sleep**.

Note: Wait until the power indicator light starts blinking (indicating that the computer is in sleep mode) before you move your computer. Moving your computer while the hard disk is spinning can damage the hard disk, causing loss of data.

To wake the computer, do one of the following:

- Press the power button.
- Press any key on the keyboard.

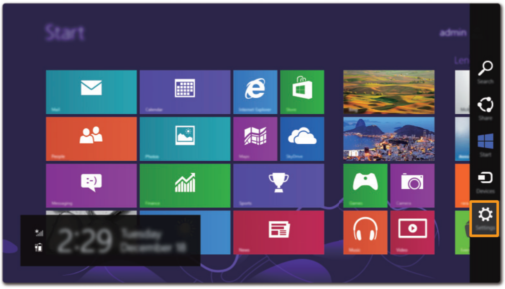
Shutting down the computer

If you are not going to use your computer for a long time, shut it down.

To shut down your computer:

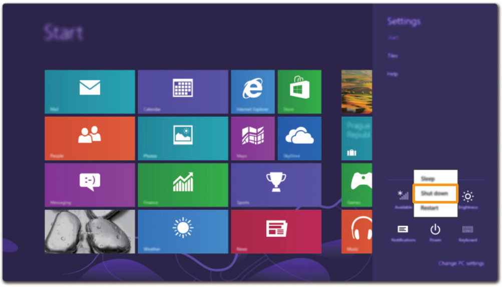
1. Open the charms, select **Settings** ⚙ .

①


Start
admin
2:29

2. Select **Power** ⏻ → **Shut down**.

②


Start
Settings
Sleep
Shut down
Restart

Lenovo IdeaPad Y410p/Y510p

This chapter presents the following product-specific service references and product-specific parts information:

- see "Specifications" on page 27
- see "Status indicators" on page 29
- see "Fn key combinations" on page 31
- see "FRU replacement notices" on page 32
- see "Removing and replacing an FRU" on page 33
- see "Locations" on page 80
- see "Parts list" on page 83

Specifications

The following table lists the specifications of the Lenovo IdeaPad Y410p/Y510p:

Table 1. Specifications

Feature	Description
Processor	• See the system properties of your computer, you can do this as follows: Click **Control Panel**, then click **Hardware and Sound**, click **Device Manager** under **Devices and Printers** and double click **Processors**.
Core Chipset	• Intel HM86
Bus architecture	• PEG • FDI • DMI • SATA Gen1 • SATA Gen3 • PCIE Gne1 • SPI • HDMI 1.4b • LPC • HD Audio • USB 2.0 • USB 3.0
Graphic Chipset	• NV N14P-GT 35W • NV N14P-GT1 35W
Display	• Y410p: 14.0" 16:9 HD, flat type 1366 × 768 pixels (220 nit) • Y510p: 15.6" 16:9 FHD wedge type LED panel 1920 × 1080 pixels 15.6" 16:9 HD wedge type LED panel 1366 × 768 pixels (200 nit) (IPS option)

Table 1. Specifications (continued)

Feature	Description
Standard memory	• DDR3 1600 (Support Dual Channel) • SODIMM × 2
CMOS RAM	• 256 bytes
Hard disk drive	• 500GB, 5400rpm (7mm) • 500GB, 5400rpm • 1TB, 5400rpm • 1TB,5400rpm Hybrid
Solid-state drive	• 256GB SSD
Optical drive	• 9.5 mm, 2.5-inch • DVD Rambo • Blueray Rambo---base on GEO forecast
I/O port	• External monitor connector • Headphone jack × 1, Mic-in jack × 1 • RJ45 × 1 • USB 2.0 × 2, USB 3.0 × 1 or USB 2.0 × 1, USB 3.0 × 2 • 6-in1 card reader (SD/SDHC/SDXC/MMC/MS/ MS-Pro)
MODEM slot	• N/A
Audio	• 1/8" Stereo Headphone Output Jack/ SPIDIF, 1/8" Input Jack Microphone • Built-in stereo speakers • Built-in microphone
Video	• HDMI port × 1 • VGA × 1
Ethernet (on the system board)	• 1G LAN
PCI Express Mini Card slot	• Wimax/WIFI × 1 • SSD × 1
WLAN	• Intel 802.16e Wimax • Intel 802.11 a/b/g/n WIFI
WWAN	• N/A
Bluetooth wireless	• Built-in antenna with min-USB interface, select Models
Keyboard	• 6 Row, ISO Full Size Keyboard,backlit (optional) (Y410p) • 6 Row, ISO Full Size Keyboard,backlit (Y510p)
Touch pad	• One-piece Touch pad
Integrated camera	• HD Camera
Battery	• 6 cells, 62 Wh/48 Wh
AC adapter	• 90 W/120 W/170 W
Pre-installed operating system	• Win8/Linux/Free DOS

Status indicators

The system status indicators below show the computer status:

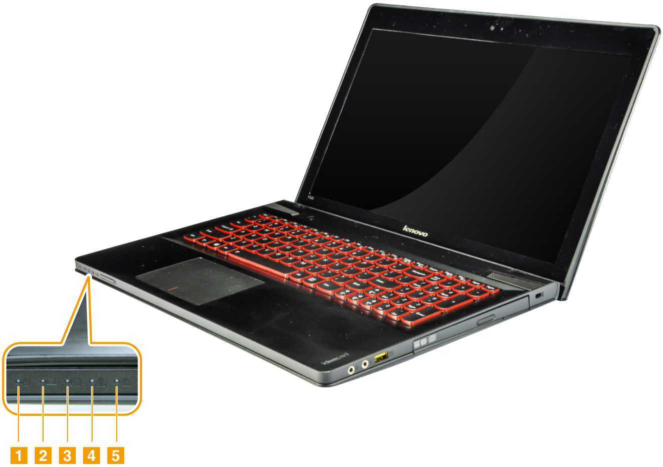


Table 2. Status indicators

Indicator	Meaning
1 Power on	**White:** System is enabled. **Blinking white:** System is in sleep mode. **off:** System is in hibernate mode or shut down.
2 Battery status	**Blinking amber:** (500ms off/1s on) The remaining power of the battery is less than 5% of its capacity. **Blinking amber:** (100ms off/3.2s on) The battery is being charged with the remaining power between 5% and 20% of its capacity. **Amber:** The computer is operating on battery power with the remaining power between 5% and 20% of its capacity. **Blinking white:** The battery is being charged with the remaining power between 20% and 80% of its capacity. **White:** The remaining power of the battery is more than 80% of its capacity, or the computer is operating on battery power with the remaining power between 20% and 80% of its capacity.
3 Touchpad	**White:** The touchpad is disabled.
4 Caps lock	**White:** Caps Lock mode is enabled. You can enter all alphabetic characters (A-Z) in uppercase without pressing the Shift key. To enable or disable Caps Lock mode, press the CapsLk key.
5 Num lock	**White:** The separate numeric keypad on the keyboard is enabled. To enable or disable the numeric keypad, press the Num Lock key.

Fn key combinations

The following table shows the function of each combination of Fn with a function key.

Table 3. Fn key combinations

Fn + Esc:	Cancels hotkey.
Fn + F1:	Enters sleep mode.
Fn + F2:	Turns on/off the backlight of the LCD screen.
Fn + F3:	Opens the interface for selecting display options.
Fn + F5:	Enables/disables Airplane mode.
Fn + F6:	Enables/disables the touch pad.
Fn + F9:	Opens the Settings charm.
Fn + F10:	Opens the Search charm.
Fn + F11:	Displays current apps.
Fn + F12:	Displays all apps.
Fn + PrtSc:	Activates the system request.
Fn + Insert (Y510p): Fn + PgUp (Y410p):	Enables/disables the scroll lock.
Fn + Home:	Activates the pause function.
Fn + End:	Activates the break function.
Fn + PgDn (Y410p):	Activates the insert function.
Fn + ↑ / ↓:	Increases/decreases the display brightness.
Fn + → / ←:	Increases/decreases the volume.
Fn + Space (on select models):	Turns on/off the keyboard backlight.

FRU replacement notices

This section presents notices related to removing and replacing parts. Read this section carefully before replacing any FRU.

Screw notices

Loose screws can cause a reliability problem. In the Lenovo computer, this problem is addressed with special nylon-coated screws that have the following characteristics:

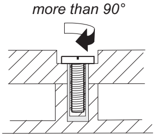
- They maintain tight connections.
- They do not easily come loose, even with shock or vibration.
- They are harder to tighten.
- Each one should be used only once.

Do the following when you service this machine:

- Keep the screw kit in your tool bag.
- Carefully remove screws for reuse when replacing FRUs.
- Use a torque screwdriver if you have one.

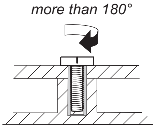
Tighten screws as follows:

- **Plastic to plastic**
  Turn an additional 90° after the screw head touches the surface of the plastic part:



(Cross-section)

- **Logic card to plastic**
  Turn an additional 180° after the screw head touches the surface of the logic card:



(Cross-section)

- **Torque driver**
  If you have a torque screwdriver , refer to the “Torque” column for each step.
- Make sure that you use the correct screws. If you have a torque screwdriver, tighten all screws firmly to the torque shown in the table. **Carefully remove screws for reuse when replacing FRUs. Make sure that all screws are tightened firmly**.
- Ensure torque screwdrivers are calibrated correctly following country specifications.

Removing and replacing an FRU

This section presents exploded figures with the instructions to indicate how to remove and replace the FRU. Make sure to observe the following general rules:

1. Do not attempt to service any computer unless you have been trained and certified. An untrained person runs the risk of damaging parts.
2. Before replacing any FRU, review see “FRU replacement notices” on page 32.
3. Begin by removing any FRUs that have to be removed before the failing FRU. Any of such FRUs are listed at the top of the page. Remove them in the order in which they are listed.
4. Follow the correct sequence in the steps to remove the FRU, as given in the figures by the numbers in square callouts.
5. When turning a screw to replace an FRU, turn it in the direction as given by the arrow in the figure.
6. When removing the FRU, move it in the direction as given by the arrow in the figure.
7. To put the new FRU in place, reverse the removal procedures and follow any of the notes that pertain to replacement. For information about connecting and arranging internal cables, see “Locations” on page 80.
8. When replacing an FRU, use the correct screw as shown in the procedures.

⚠ **DANGER**

Before removing any FRU, turn off the computer, unplug all power cords from electrical outlets, remove the battery pack, and then disconnect any of the interconnecting cables.

Attention: After replacing an FRU, do not turn on the computer until you have made sure that all screws, springs, and other small parts are in place and none are loose inside the computer. Verify this by shaking the computer gently and listening for rattling sounds. Metallic parts or metal flakes can cause electrical short circuits.

Attention: The system board is sensitive to, and can be damaged by, electrostatic discharge. Before touching it, establish personal grounding by touching a ground point with one hand or using an electrostatic discharge (ESD) strap (P/N 6405959) to remove potential shock reasons.

Note: The illustrations used in this section are of the Lenovo Ideapad Y510p, unless otherwise stated.

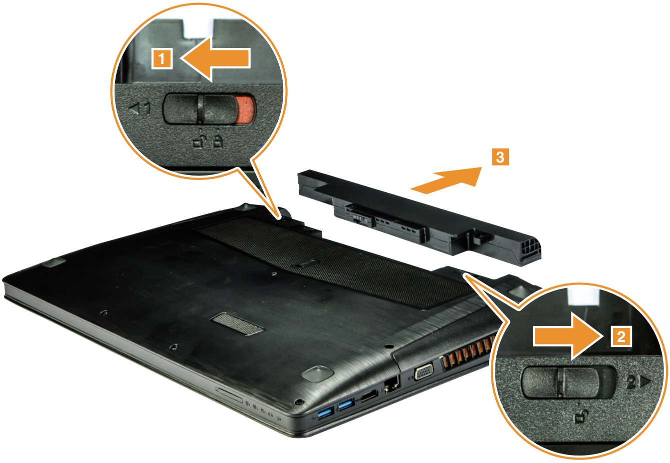
1010 Battery pack

⚠ **DANGER**

Only use the battery specified in the parts list for your computer. Any other battery could ignite or explode.

Figure 1. Removal steps of battery pack

Unlock the manual battery latch **1**. Holding the spring-loaded battery latch in the unlocked position **2**, remove the battery pack in the direction shown by the arrow **3**.



When installing: Install the battery pack along the slide rails of the slot. Then make sure that the battery release lever is in the locked position.

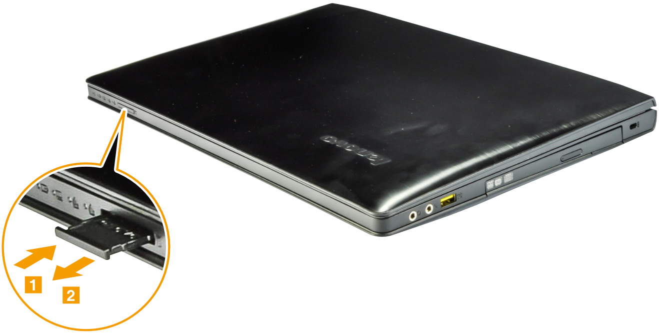
1020 Dummy card

For access, remove this FRU:

- see “1010 Battery pack” on page 34

Figure 2. Removal steps of dummy cards

Remove the dummy card in the direction shown by arrows **1** **2**.



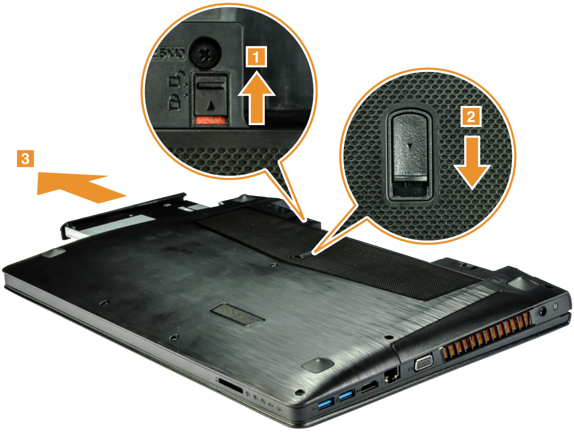
1030 Optical drive

For access, remove this FRU:

- see “1010 Battery pack” on page 34

Figure 3. Removal steps of optical drive

Push the latch in the direction shown by arrow **1**. Hold the spring-loaded latch in the unlocked position **2**. Gently pull out the optional module in the direction shown by arrow **3**.



1040 Hard disk drive(HDD)/Memory/Mini PCI Express Card slot compartment cover

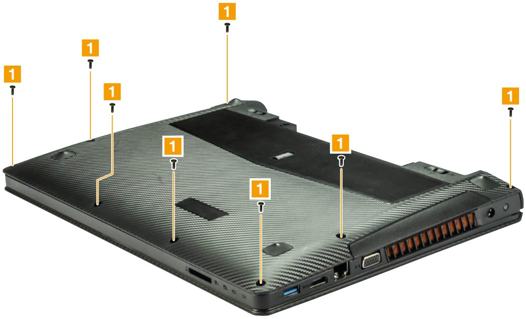
For access, remove these FRUs in order:

- see “1010 Battery pack” on page 34
- see “1030 Optical drive” on page 36

Figure 4. Removal steps of HDD/Memory/Mini PCI Express Card slot compartment cover

Y410p

Remove the screws **1** that secure the compartment cover. Remove the compartment cover..

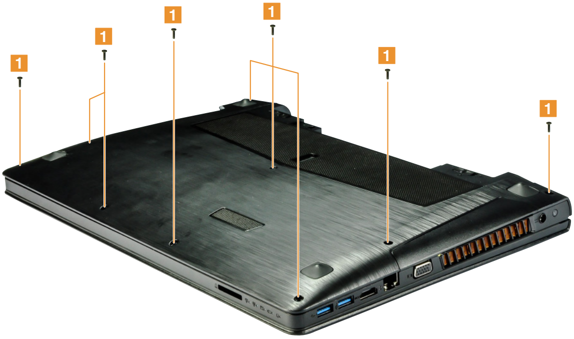


Step	Screw (quantity)	Color	Torque
1	M2.5 X8 mm,flat-head, nylok-coated(8)	Black	2.0 ~ 2.5 kgfcm

Figure 4. Removal steps of HDD/Memory/Mini PCI Express Card slot compartment cover

Y510p

Remove the screws **1** that secure the compartment cover. Remove the compartment cover.



Step	Screw (quantity)	Color	Torque
1	M2.5 × 10 mm, flat-head, nylok-coated (9)	Black	2.0 ~ 2.5 kgfcm

1050 Hard disk drive

For access, remove these FRUs in order:

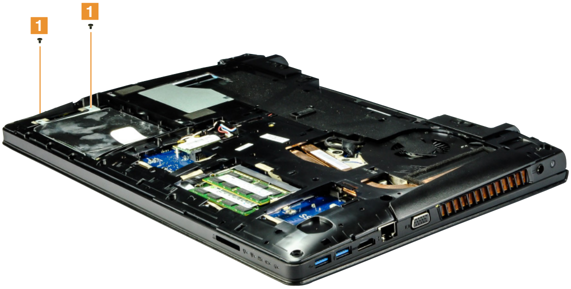
- see “1010 Battery pack” on page 34
- see “1040 Hard disk drive(HDD)/Memory/Mini PCI Express Card slot compartment cover” on page 37

Attention:

- **Do not drop the hard disk drive or apply any physical shock to it.** The hard disk drive is sensitive to physical shock. Improper handling can cause damages and permanent loss of data.
- Before removing the drive, suggest the customer to backup all the information on it if possible.
- Never remove the drive while the system is operating or is in suspend mode.

Figure 5. Removal steps of hard disk drive

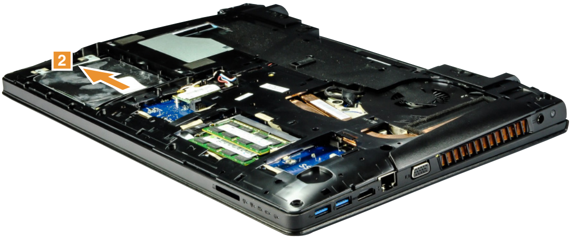
Remove the frame fixing screws **1** .



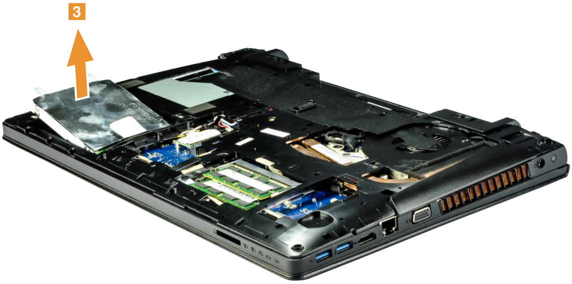
Step	Screw (quantity)	Color	Torque
1	M2.5 × 4 mm, flat-head, nylok-coated (2) (Y410p)	Black	1.5 ~ 2.0 kgfcm
	M2.5 × 4 mm, flat-head, nylok-coated (2) (Y510p)	Black	2.0 ~ 2.5 kgfcm

Figure 5. Removal steps of hard disk drive (continued)

Pull the hard disk driver in the direction shown by arrow **2** .



Take out the hard disk drive secured in a metal frame **3** .



When installing: Make sure that the HDD connector is attached firmly.

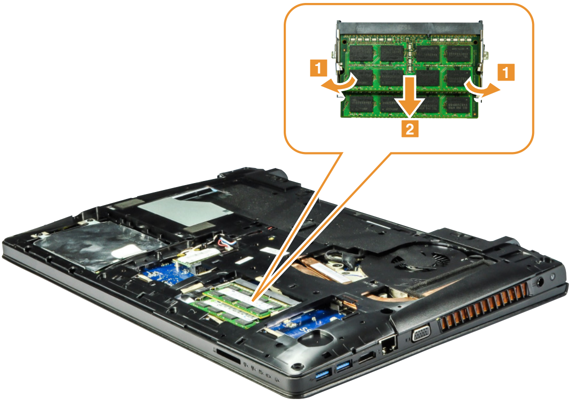
1060 DIMM

For access, remove these FRUs in order:

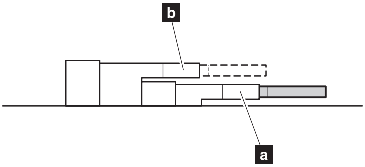
- see “1010 Battery pack” on page 34
- see “1040 Hard disk drive(HDD)/Memory/Mini PCI Express Card slot compartment cover” on page 37

Figure 6. Removal steps of DIMM

Release the two latches on both edges of the socket at the same time in the direction shown by arrows 1, and then unplug the DIMM in the direction shown by arrow 2.



Note: If only one DIMM is used on the computer you are servicing, the card must be installed in SLOT-0 (a : lower slot), but not in SLOT-1 (b : upper slot).



When installing: Insert the notched end of the DIMM into the socket. Push the DIMM firmly, and pivot it until it snaps into the place. Make sure that it is firmly fixed in the slot and difficult to be moved.

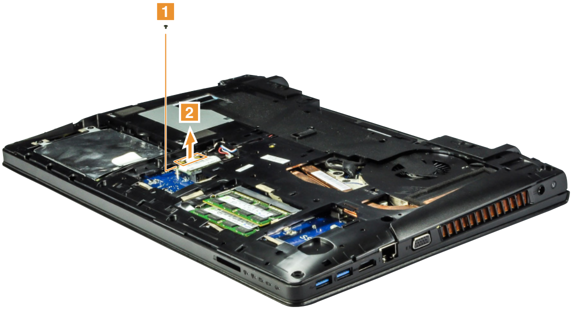
1070 PCI Express Mini Card for wireless LAN/WAN

For access, remove these FRUs in order:

- see "1010 Battery pack" on page 34
- see "1040 Hard disk drive(HDD)/Memory/Mini PCI Express Card slot compartment cover" on page 37

Figure 7. Removal steps of PCI Express Mini Card for wireless LAN/WAN

Disconnect the two wireless LAN cables **1**, and then remove the screw **2**.



In step **1**, unplug the jacks by using the removal tool antenna RF connector (P/N: 08K7159), or pick up the connectors with your fingers and gently unplug them in the direction shown by arrows.

Notes: wireless LAN card has 2 cables in step **1**.

Wireless LAN card in some models may have 3 cables in step **1**.

Step	Screw (quantity)	Color	Torque
2	M2 × 3 mm, flat-head, nylok-coated (1)	Black	1.5 ~ 2.0 kgfcm

Remove the card in the direction shown by arrow **3**.

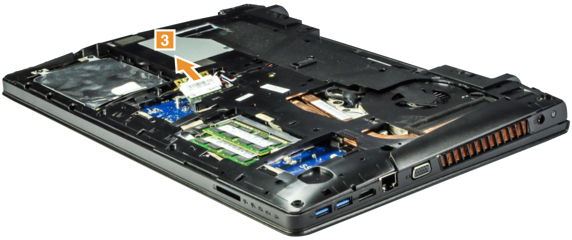


Figure 7. Removal steps of PCI Express Mini Card for wireless LAN/WAN (continued)

When installing:

- In models with a wireless LAN card that has two antenna connectors, plug the black cable (1st) (MAIN) into the jack labeled **1**, and the white cable (2nd) (AUX) into jack labeled **2** on the card.
- In models with a wireless LAN card that has three antenna connectors, plug the black cable (1st) (MAIN) into the jack labeled **1**, the grey cable (3rd) into jack labeled **3**, and the white cable (2nd) (AUX) into jack labeled **2** on the card.

1080 Keyboard

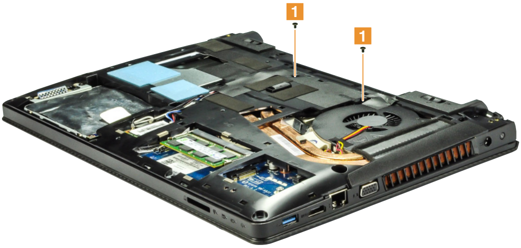
For access, remove these FRUs in order:

- see "1010 Battery pack" on page 34
- see "1030 Optical drive" on page 36
- see "1040 Hard disk drive(HDD)/Memory/Mini PCI Express Card slot compartment cover" on page 37

Figure 8. Removal steps of keyboard

Y410p

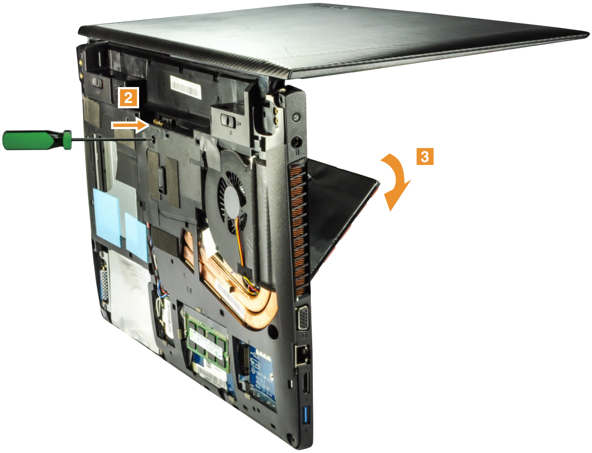
Remove two screws **1**.



Step	Screw (quantity)	Color	Torque
1	M2.5 × 4 mm, flat-head, nylok-coated (2)	Black	1.5 ~ 2.0 kgfcm

Figure 8. Removal steps of keyboard (continued)

Push the back of the keyboard in the direction shown by arrow **2**. Loosen the keyboard with fingers in the direction shown by arrow **3**.



Lift the keyboard a little **4**, and then detach the connectors in the direction shown by arrows **5**. Then remove the keyboard.

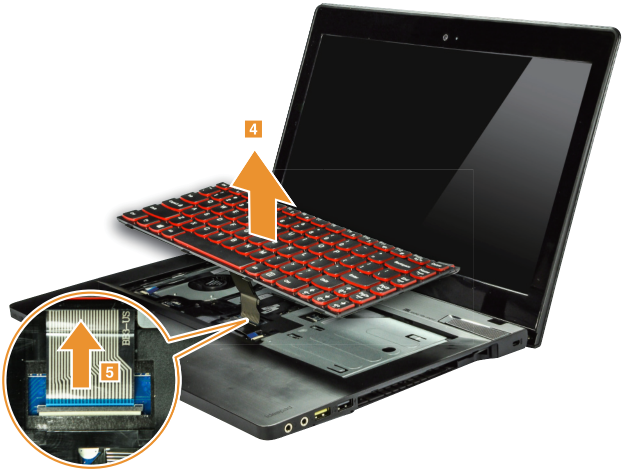
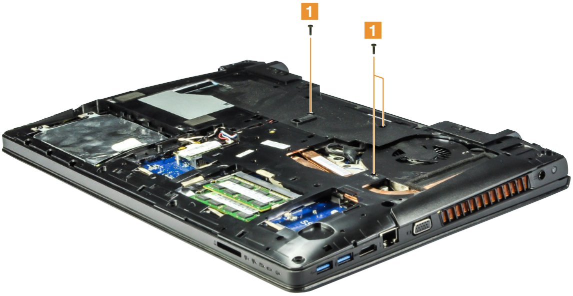


Figure 8. Removal steps of keyboard (continued)

Y510p

Remove three screws **1**.



Step	Screw (quantity)	Color	Torque
1	M2.5 × 10 mm, flat-head, nylok-coated (3)	Black	1.5 ~ 2.0 kgfcm

Push the back of the keyboard in the direction shown by arrow **2**. Loosen the keyboard with fingers in the direction shown by arrow **3**.

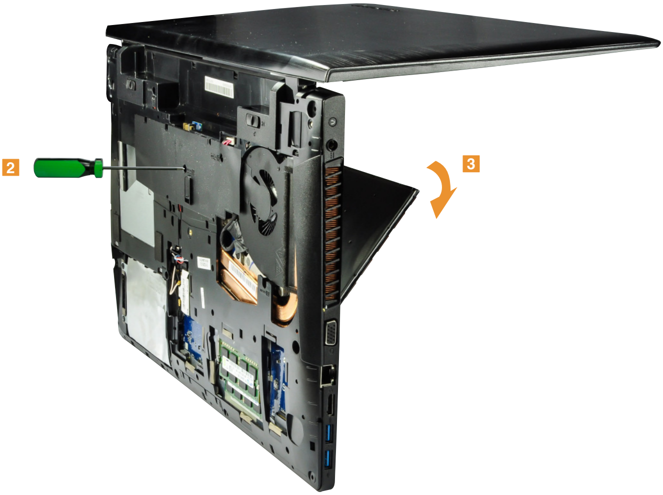
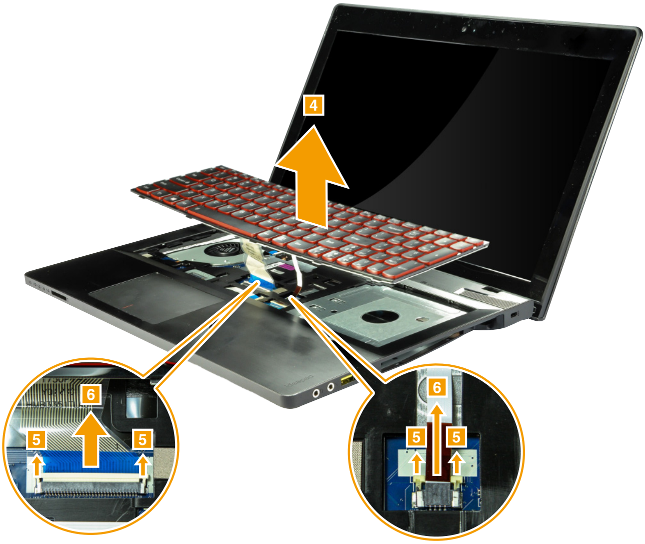


Figure 8. Removal steps of keyboard (continued)

Lift the keyboard a little **4**, and then detach the connectors in the direction shown by arrows **5** **6**. Then remove the keyboard.



1090 Keyboard bezel

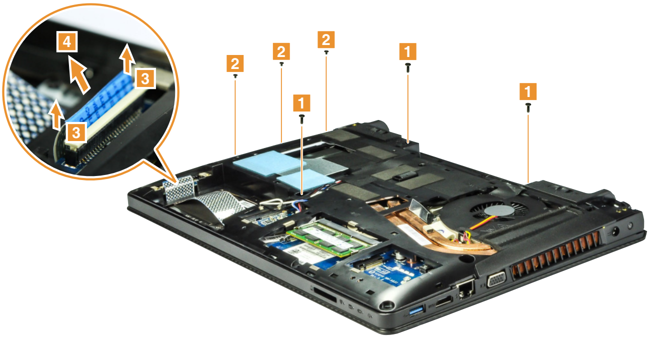
For access, remove these FRUs in order:

- see “1010 Battery pack” on page 34
- see “1020 Dummy card” on page 35
- see “1030 Optical drive” on page 36
- see “1040 Hard disk drive(HDD)/Memory/Mini PCI Express Card slot compartment cover” on page 37
- see “1070 PCI Express Mini Card for wireless LAN/WAN” on page 42
- see “1080 Keyboard” on page 44

Figure 9. Removal steps of keyboard bezel

Y410p

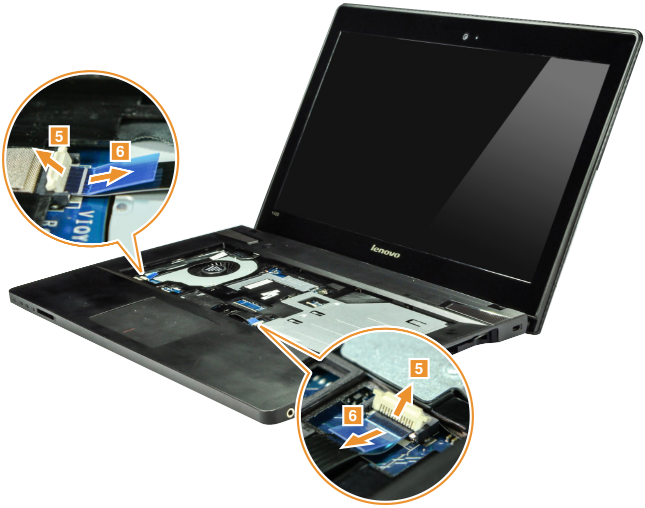
Remove three screws **1** and three screws **2** on the bottom. Detach the audio cable in the direction shown by arrow **3** **4**.



Step	Screw (quantity)	Color	Torque
1	M2.5 × 8 mm, flat-head, nylok-coated (3)	Black	1.5 ~ 2.0 kgfcm
2	M2 × 3 mm, flat-head, nylok-coated (3)	Black	1.0 ~ 1.5 kgfcm

Figure 9. Removal steps of keyboard bezel (continued)

Detach the power board connector and the touch pad cable in the direction shown by arrows **5** **6** .



When installing: Make sure that all the connectors are attached firmly.

Remove the keyboard bezel in the direction shown by arrow **7** .

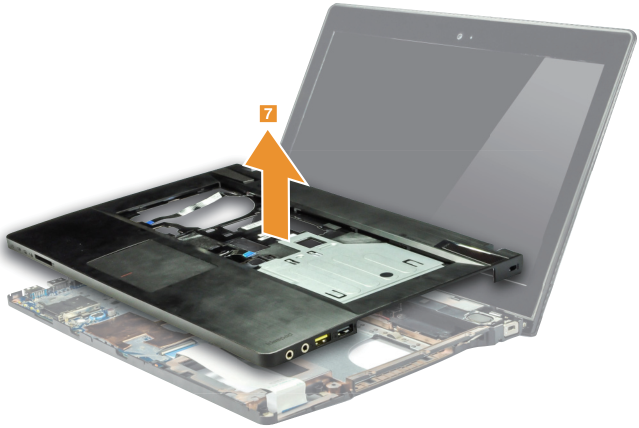
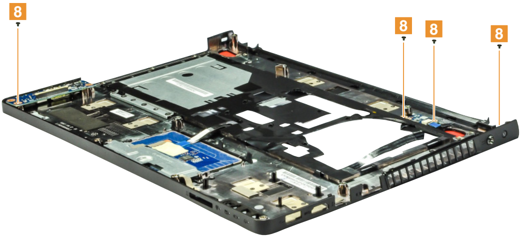


Figure 9. Removal steps of keyboard bezel (continued)

Remove the four screw **8** .



Step	Screw (quantity)	Color	Torque
8	M2 × 3 mm, flat-head, nylok-coated (4)	Black	1.5 ~ 2.0 kgfcm

Remove the audio board, power board and function board in the direction shown by arrows **9** .

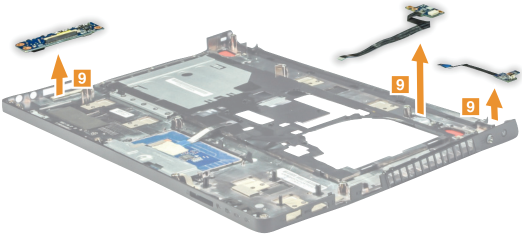
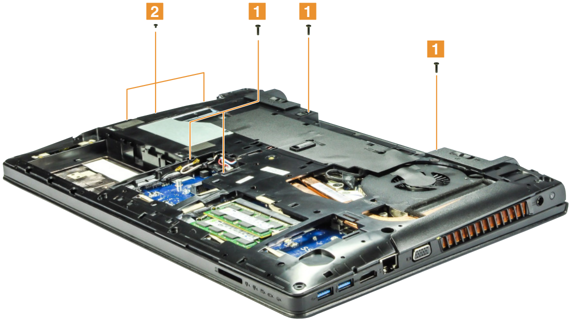


Figure 9. Removal steps of keyboard bezel (continued)

Y510p

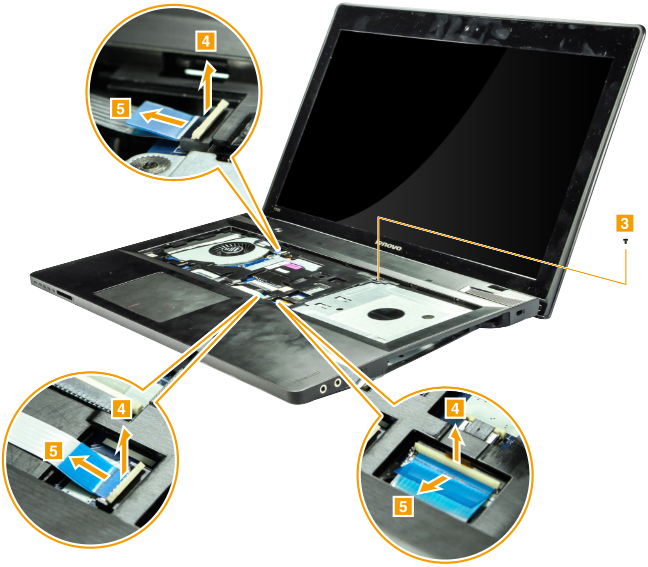
Remove four screws **1** and three screws **2** on the bottom..



Step	Screw (quantity)	Color	Torque
1	M2.5 × 10 mm, flat-head, nylok-coated (4)	Black	1.5 ~ 2.0 kgfcm
2	M2 × 3 mm, flat-head, nylok-coated (3)	Black	1.0 ~ 1.5 kgfcm

Figure 9. Removal steps of keyboard bezel (continued)

Remove the screw **3**. Detach the power board, USB Board and touch pad connectors in the direction shown by arrows **4** **5**.

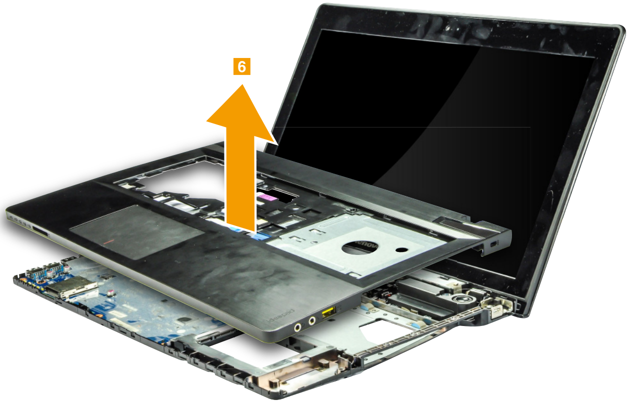


Step	Screw (quantity)	Color	Torque
3	M2.5 × 4 mm, flat-head, nylok-coated (1)	Black	1.5 ~ 2.0 kgfcm

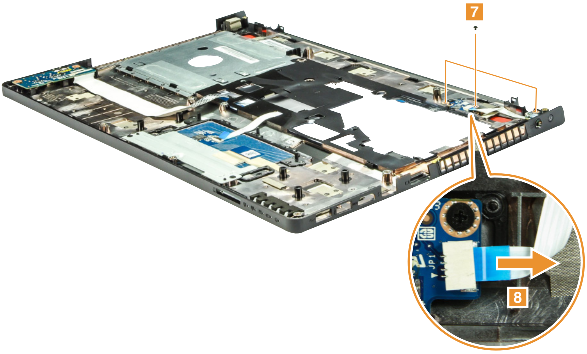
When installing: Make sure that all the connectors are attached firmly.

Figure 9. Removal steps of keyboard bezel (continued)

Remove the keyboard bezel in the direction shown by arrow **6**.



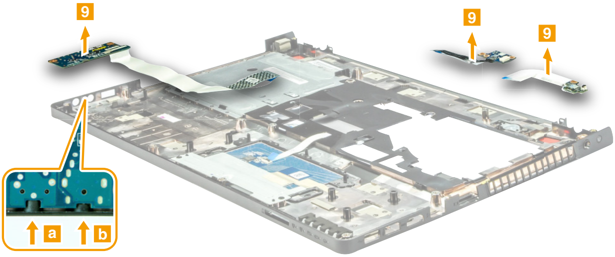
Remove the three screw **7**. Detach the FPC connector in the direction shown by arrow **8**.



Step	Screw (quantity)	Color	Torque
7	M2 × 3 mm, flat-head, nylok-coated (3)	Black	1.5 ~ 2.0 kgfcm

Figure 9. Removal steps of keyboard bezel (continued)

Remove the USB board, power board and function board in the direction shown by arrows 9 .



When installing: When attaching the audio board to the keyboard bezel, adjust the placement of the ports as shown in a b . Improper placement of the ports or those jacks might cause a damage.

1100 System board

Important notices for handling the system board:

When handling the system board, bear the following in mind.

- Be careful not to drop the system board on a bench top that has a hard surface, such as metal, wood, or composite.
- Avoid rough handling of any kind.
- In the whole process, make sure not to drop or stack the system board.
- If you put a system board down, make sure to put it only on a padded surface such as an ESD mat or conductive corrugated material.

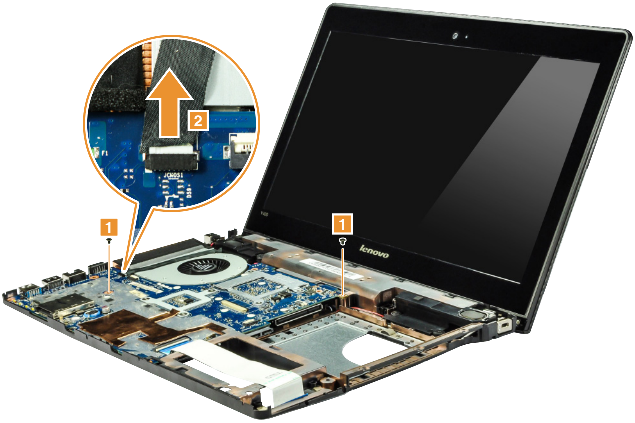
For access, remove these FRUs in order:

- see "1010 Battery pack" on page 34
- see "1020 Dummy card" on page 35
- see "1030 Optical drive" on page 36
- see "1040 Hard disk drive(HDD)/Memory/Mini PCI Express Card slot compartment cover" on page 37
- see "1050 Hard disk drive" on page 39
- see "1070 PCI Express Mini Card for wireless LAN/WAN" on page 42
- see "1080 Keyboard" on page 44
- see "1090 Keyboard bezel" on page 48

Figure 10. Removal steps of system board

Y410p

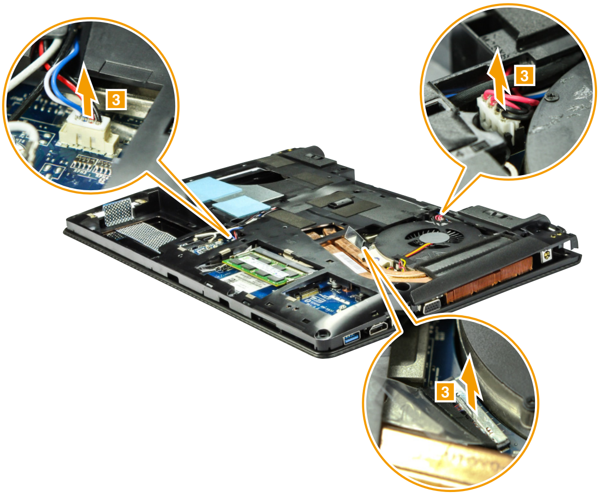
Remove screws **1** . Detach camera connector in the direction shown by arrow **2** .



Step	Screw (quantity)	Color	Torque
1	M2.5 × 4 mm, flat-head, nylok-coated (2)	Black	2.0 ~ 2.5 kgfcm

Figure 10. Removal steps of system board

Unplug DC-IN connector, LCD connector and speakers cable in the direction shown by arrows 3 .



When installing: Make sure that all the connectors are attached firmly.

Remove the system board in the direction shown by arrow 4 .

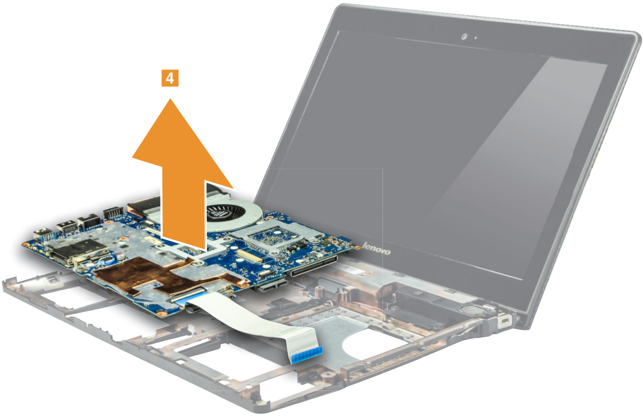
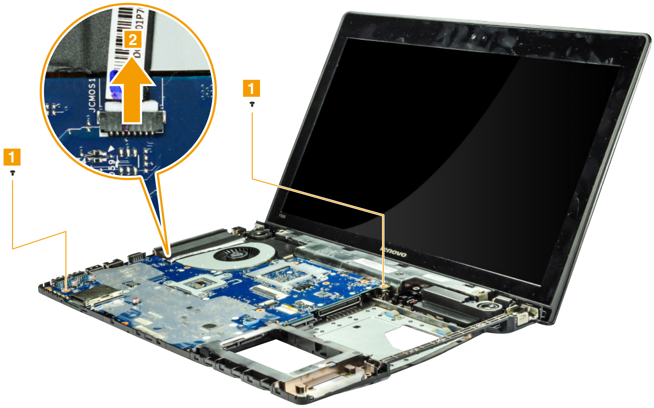


Figure 10. Removal steps of system board

Y510p

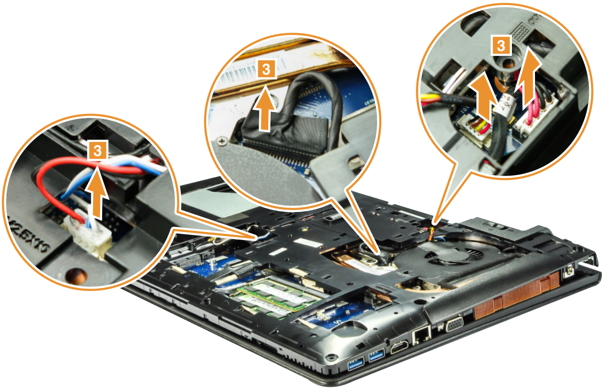
Remove the screws **1** . Detach camera connector in the direction shown by arrow **2** .



Step	Screw (quantity)	Color	Torque
1	M2.5 × 4 mm, flat-head, nylok-coated (2)	Black	1.5 ~ 2.0 kgfcm

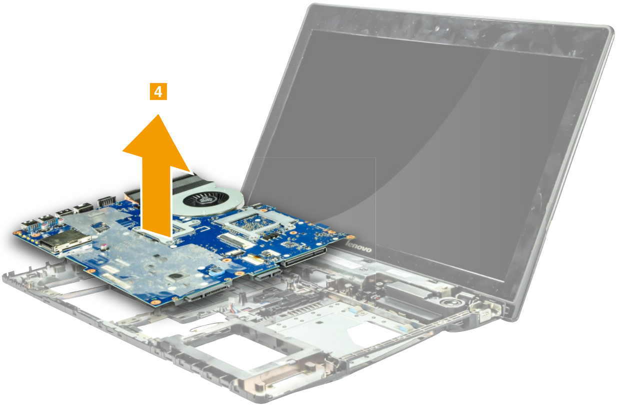
Figure 10. Removal steps of system board

Unplug DC-IN connector, LCD connector, fan connector and speakers cable in the direction shown by arrows **3** .



When installing: Make sure that all the connectors are attached firmly.

Remove the system board in the direction shown by arrow **4** .



1110 Fan assembly and Heat Sink assembly

For access, remove these FRUs in order:

- see "1010 Battery pack" on page 34
- see "1020 Dummy card" on page 35
- see "1030 Optical drive" on page 36
- see "1040 Hard disk drive(HDD)/Memory/Mini PCI Express Card slot compartment cover" on page 37
- see "1050 Hard disk drive" on page 39
- see "1060 DIMM" on page 41
- see "1070 PCI Express Mini Card for wireless LAN/WAN" on page 42
- see "1080 Keyboard" on page 44
- see "1090 Keyboard bezel" on page 48
- see "1100 System board" on page 55

Figure 11. Removal steps of fan assembly and heat sink assembly

Y410p

Detach the fan connector in the direction shown by arrow **1** and loosen six screws **2** to lift the fan assembly.

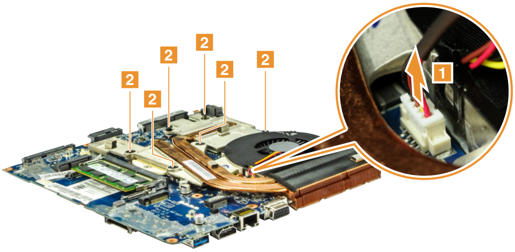
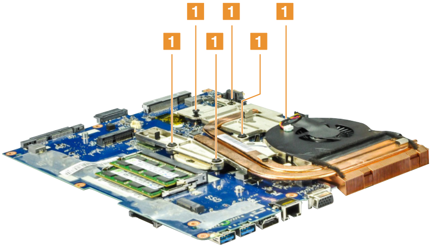


Figure 11. Removal steps of fan assembly and heat sink assembly

Y510p

Loosen six screws **1** to lift the fan assembly.



When installing: Make sure that the fan connector is attached firmly to the system board.

1120 CPU

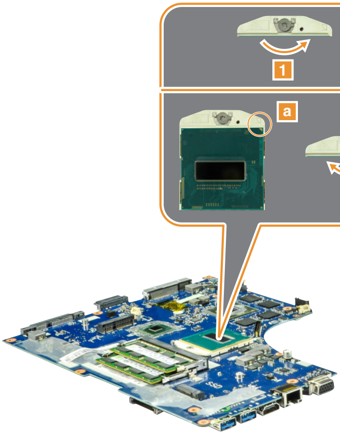
For access, remove these FRUs in order:

- see "1010 Battery pack" on page 34
- see "1020 Dummy card" on page 35
- see "1030 Optical drive" on page 36
- see "1040 Hard disk drive(HDD)/Memory/Mini PCI Express Card slot compartment cover" on page 37
- see "1050 Hard disk drive" on page 39
- see "1060 DIMM" on page 41
- see "1070 PCI Express Mini Card for wireless LAN/WAN" on page 42
- see "1080 Keyboard" on page 44
- see "1090 Keyboard bezel" on page 48
- see "1100 System board" on page 55
- see "1110 Fan assembly and Heat Sink assembly" on page 59

Attention: CPU is extremely sensitive. When you service the CPU, avoid any kind of rough handling.

Figure 12. Removal steps of CPU

Rotate the head of the screw in the direction shown by arrow **1** to release the lock, then remove the CPU in the direction shown by arrow **2**.



When installing: Place the CPU on the CPU socket in the direction shown by arrow **a**, and then rotate the head of the screw in the direction shown by arrow **b** to secure the CPU.

1130 Base cover, speakers and power assembly

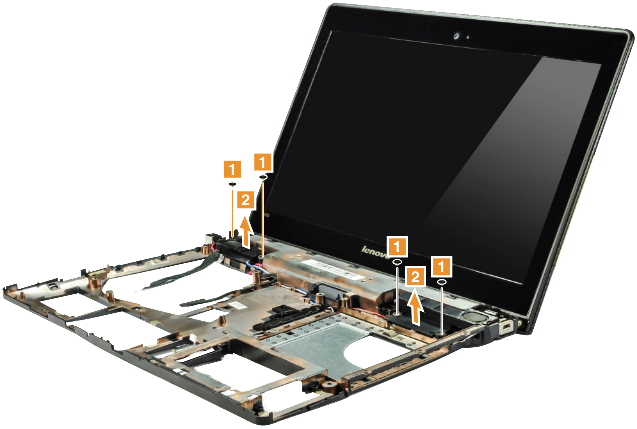
For access, remove these FRUs in order:

- see “1010 Battery pack” on page 34
- see “1020 Dummy card” on page 35
- see “1030 Optical drive” on page 36
- see “1040 Hard disk drive(HDD)/Memory/Mini PCI Express Card slot compartment cover” on page 37
- see “1050 Hard disk drive” on page 39
- see “1060 DIMM” on page 41
- see “1070 PCI Express Mini Card for wireless LAN/WAN” on page 42
- see “1080 Keyboard” on page 44
- see “1090 Keyboard bezel” on page 48
- see “1100 System board” on page 55
- see “1140 LCD unit” on page 67
- see “1110 Fan assembly and Heat Sink assembly” on page 59

Figure 13. Removal steps of base cover, speakers and power assembly

Y410p:

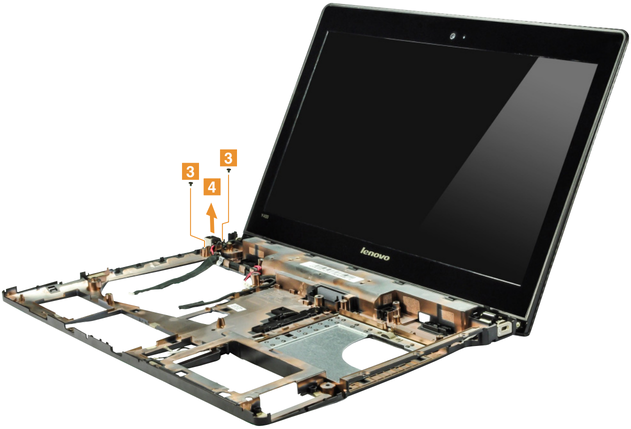
Remove the four screws **1**, and then remove the speakers **2**.



Step	Screw (quantity)	Color	Torque
1	M2.0 × 2 flat-head, nylok-coated (4)	Black	1.0 ~ 1.5 kgfcm

Figure 13. Removal steps of base cover, speakers and power assembly

Remove the two screws **3**, then remove the power assembly in the direction shown by arrow **4**.

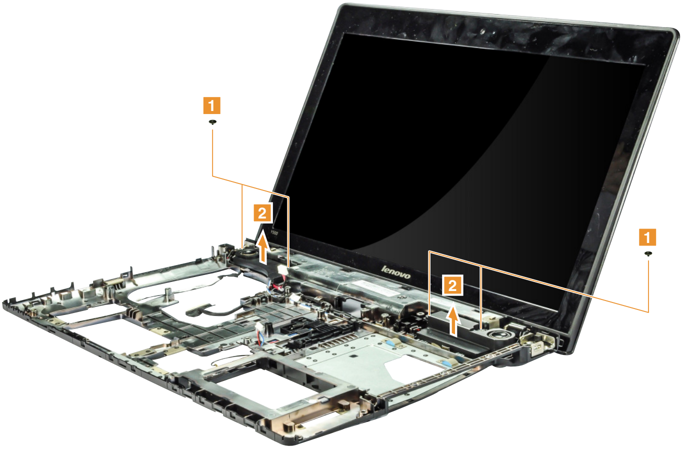


Step	Screw (quantity)	Color	Torque
3	M2.0 × 3 mm, flat-head, nylok-coated (2)	Black	1.0 ~ 1.5 kgfcm

Figure 13. Removal steps of base cover, speakers and power assembly (continued)

Y510p

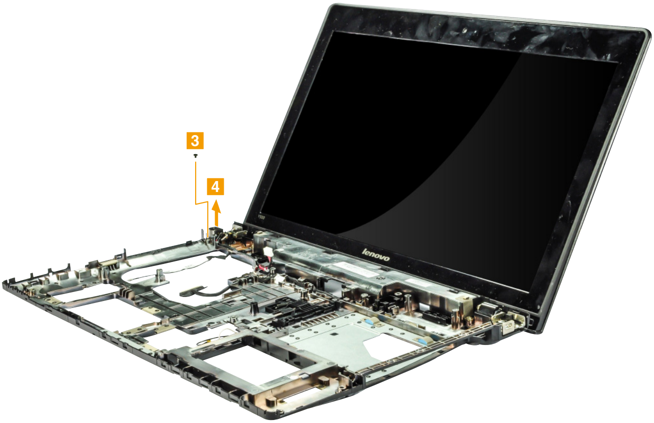
Remove the four screws **1** , and then remove the speakers **2** .



Step	Screw (quantity)	Color	Torque
1	M2.0 × 3 flat-head, nylok-coated (4)	Black	1.0 ~ 1.5 kgfcm

Figure 13. Removal steps of base cover, speakers and power assembly (continued)

Remove the screws **3**, then remove the power assembly in the direction shown by arrow **4**.



Step	Screw (quantity)	Color	Torque
3	M2.0 × 3 mm, flat-head, nylok-coated (1)	Black	1.0 ~ 1.5 kgfcm

Note: Applying labels to the base cover

The new base cover FRU is shipped with a kit containing labels of several kinds. When you replace the base cover, you need to apply the following label:

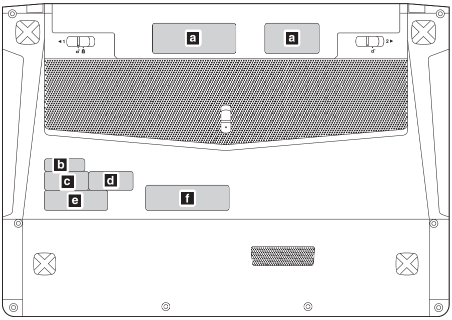
The following labels need to be peeled off from the old base cover, and need to be put on the new base cover.

a	Rating Label
b	INDONESIA D-SIDE LABEL
c	WLAN Label for BRAZIL
d	Brazil Label (BT) or WLAN Label for US/CA/TW or WLAN Label for INDONESIA or BT Label for US/CA/TW or Indonesia Label for BT or SIRIM WLAN Label or SIRIM BT Label or ISRAEL WLAN label
e	PRC/MTM CODE
f	User guide label

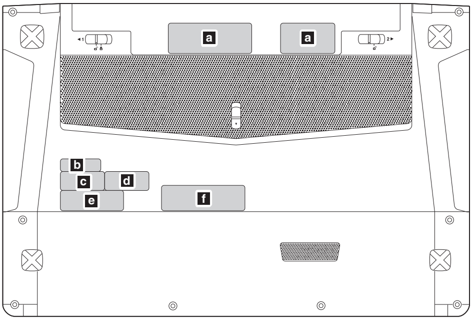
For some models, you also need to apply one or two FCC labels. Check the old base cover; if it has one or two FCC labels, find duplicates of them in the label kit and apply them to the new base cover.

For the location of each label, refer to the following figure:

Y410p



Y510p



1140 LCD unit

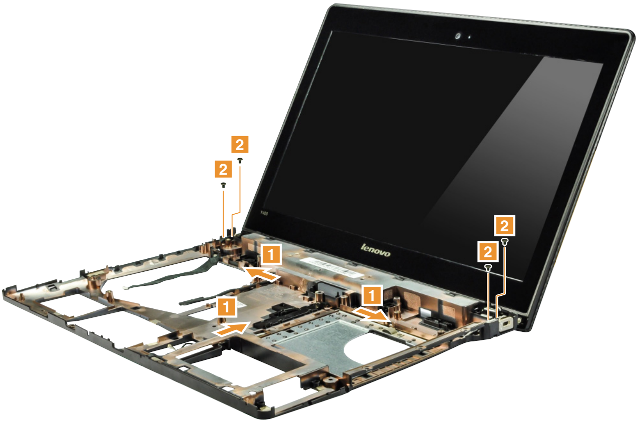
For access, remove these FRUs in order:

- see "1010 Battery pack" on page 34
- see "1020 Dummy card" on page 35
- see "1030 Optical drive" on page 36
- see "1040 Hard disk drive(HDD)/Memory/Mini PCI Express Card slot compartment cover" on page 37
- see "1050 Hard disk drive" on page 39
- see "1060 DIMM" on page 41
- see "1070 PCI Express Mini Card for wireless LAN/WAN" on page 42
- see "1080 Keyboard" on page 44
- see "1090 Keyboard bezel" on page 48
- see "1100 System board" on page 55
- see "1130 Base cover, speakers and power assembly" on page 62

Figure 14. Removal steps of LCD unit

Y410p

Release the antenna cables from the cable guides in the direction shown by arrows **1** . Remove screws **2** .



Step	Screw (quantity)	Color	Torque
2	M2.5 × 4 mm flat-head, nylok-coated (4)	Black	1.5 ~2.0 kgfcm

Figure 14. Removal steps of LCD unit (continued)

Remove the LCD unit in the direction shown by arrows **3** .

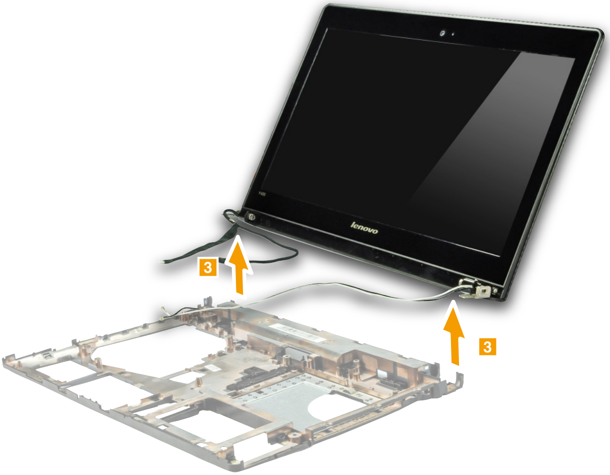
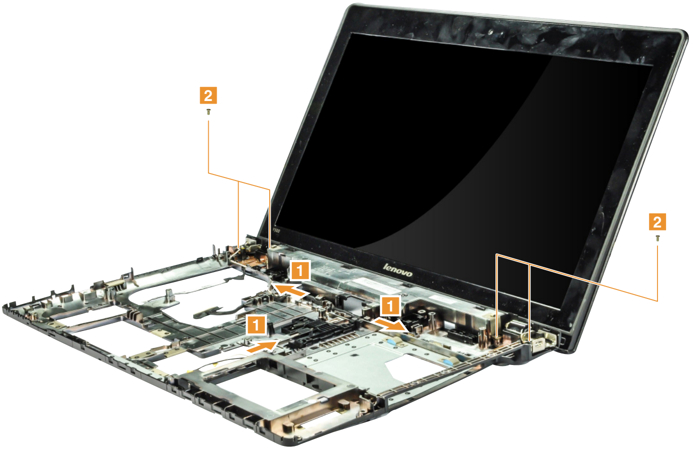


Figure 14. Removal steps of LCD unit (continued)

Y510p

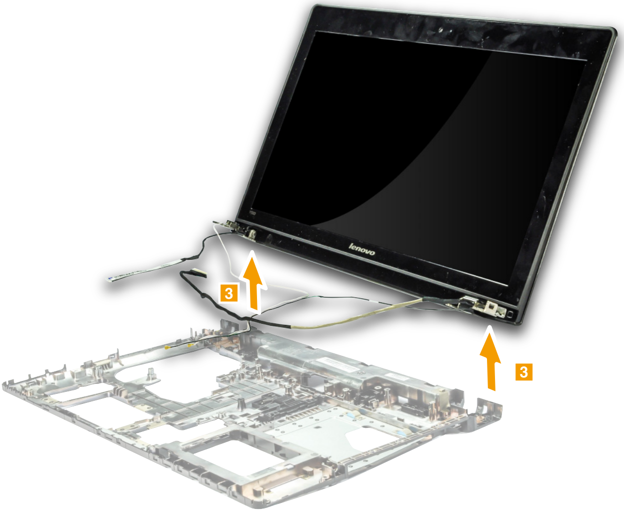
Release the antenna cables from the cable guides in the direction shown by arrows **1**. Remove four screws **2**.



Step	Screw (quantity)	Color	Torque
2	M2.5 × 5 mm, flat-head, nylok-coated (4)	Silver	1.5 ~ 2.0 kgfcm

Figure 14. Removal steps of LCD unit (continued)

Remove the LCD unit in the direction shown by arrows **3**.



When installing:

- Route the antenna cables along the cable guides. As you route the cables, make sure that they are not subjected to any tension. Tension could cause the cables to be damaged by the cable guides, or a wire to be broken.
- Make sure that the LCD connector is attached firmly and make sure that you do not pinch the antenna cables when you attach the LCD assembly. Route the LCD cable along the cable guides.

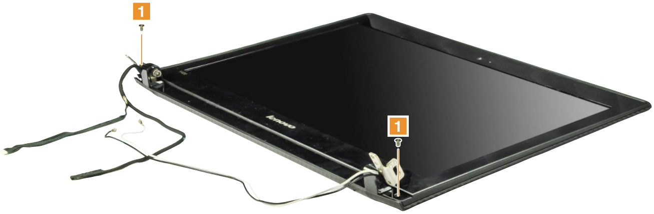
1150 LCD front bezel

For access, remove these FRUs in order:
- see “1010 Battery pack” on page 34
- see “1020 Dummy card” on page 35
- see “1030 Optical drive” on page 36
- see “1040 Hard disk drive(HDD)/Memory/Mini PCI Express Card slot compartment cover” on page 37
- see “1050 Hard disk drive” on page 39
- see “1060 DIMM” on page 41
- see “1070 PCI Express Mini Card for wireless LAN/WAN” on page 42
- see “1080 Keyboard” on page 44
- see “1090 Keyboard bezel” on page 48
- see “1100 System board” on page 55
- see “1130 Base cover, speakers and power assembly” on page 62
- see “1140 LCD unit” on page 67

Figure 15. Removal steps of LCD front bezel

Y410p

Remove two screws **1**.



Step	Screw (quantity)	Color	Torque
1	M2 × 4 mm, flat-head, nylok-coated (2)	Silver	1.5 ~ 2.0 kgfcm

Remove the LCD front bezel in the direction shown by arrows **2**.

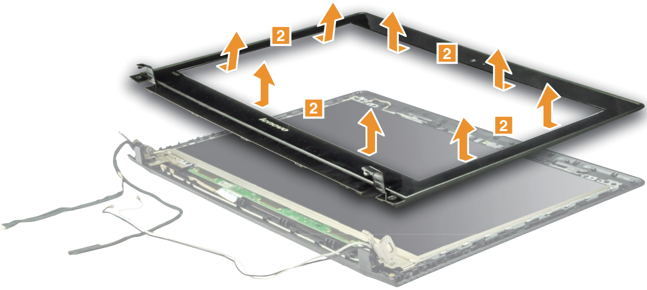
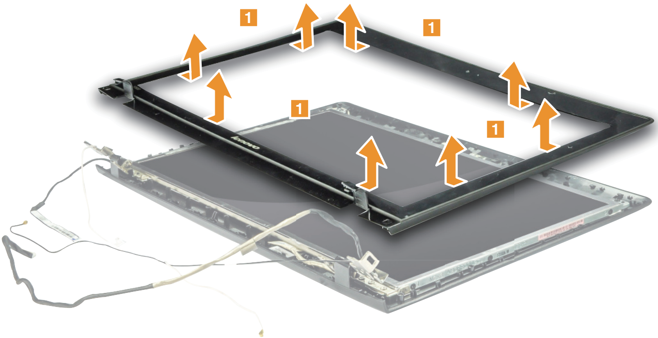


Figure 15. Removal steps of LCD front bezel (continued)

Y510p

Remove the LCD front bezel in the direction shown by arrows **1**.



1160 LCD panel, LCD cable, antenna assembly, and hinges

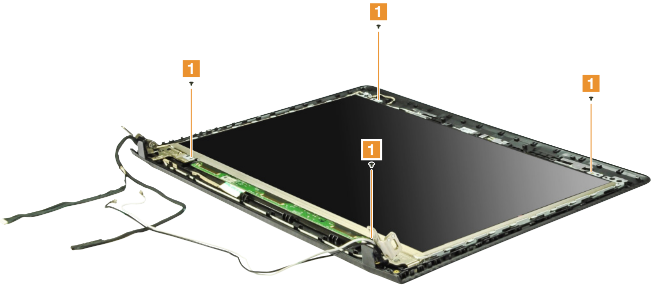
For access, remove these FRUs in order:

- see “1010 Battery pack” on page 34
- see “1020 Dummy card” on page 35
- see “1030 Optical drive” on page 36
- see “1040 Hard disk drive(HDD)/Memory/Mini PCI Express Card slot compartment cover” on page 37
- see “1050 Hard disk drive” on page 39
- see “1060 DIMM” on page 41
- see “1070 PCI Express Mini Card for wireless LAN/WAN” on page 42
- see “1080 Keyboard” on page 44
- see “1090 Keyboard bezel” on page 48
- see “1100 System board” on page 55
- see “1130 Base cover, speakers and power assembly” on page 62
- see “1140 LCD unit” on page 67
- see “1150 LCD front bezel” on page 71

Figure 16. Removal steps of LCD panel, LCD cable, antenna assembly, and hinges

Y410p

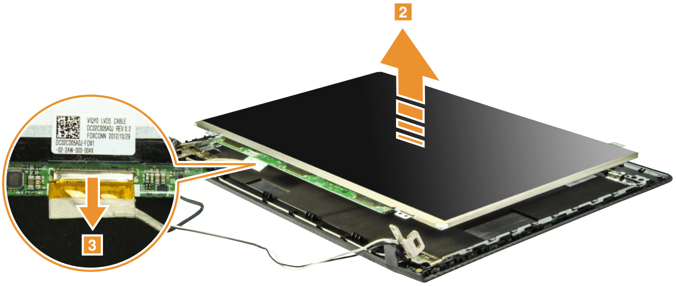
Remove four screws **1**.



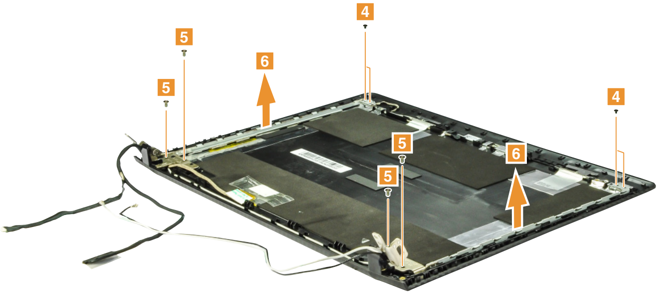
Step	Screw (quantity)	Color	Torque
1	M2 × 3 mm, flat-head, nylok-coated (4)	Silver	1.5 ~ 2.0 kgfcm

Figure 16. Removal steps of LCD panel, LCD cable, antenna assembly, and hinges (continued)

Lift the LCD panel in the direction shown by arrow 2. Peel off the adhesive tape and detach the connector in the direction shown by arrow 3. Then remove the LCD panel.



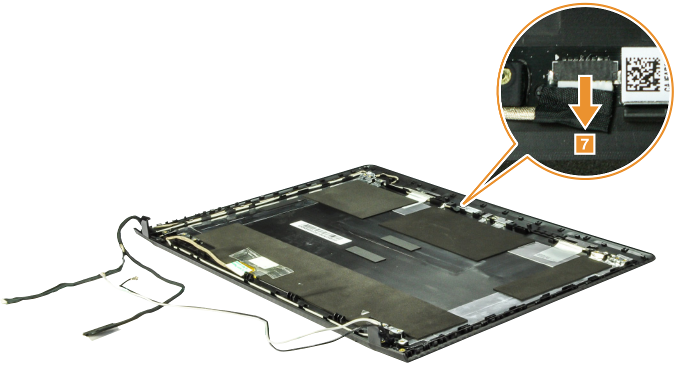
Remove four screws 4, four screws 5. Remove the hinges in the direction shown by arrows 6.



Step	Screw (quantity)	Color	Torque
4	M2 × 3 mm, flat-head, nylok-coated (4)	Black	1.0 ~ 1.5 kgfcm
5	M2 × 4 mm, flat-head, nylok-coated (4)	Silver	1.0 ~ 1.5 kgfcm

Figure 16. Removal steps of LCD panel, LCD cable, antenna assembly, and hinges (continued)

Unplug the integrated camera connector in the direction shown by arrow **7**. Then remove the LCD cable and the antenna assembly.

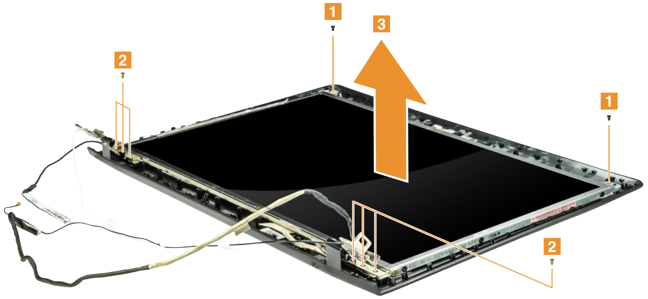


When installing: Make sure that the camera connector is attached firmly.

Figure 16. Removal steps of LCD panel, LCD cable, antenna assembly, and hinges (continued)

Y510p

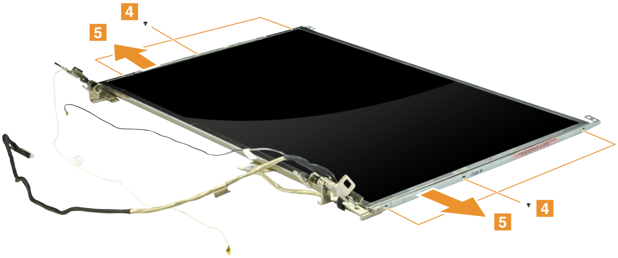
Remove two screws **1**, six screws **2**. Lift the LCD panel in the direction shown by arrow **3**.



Step	Screw (quantity)	Color	Torque
1	M2.5 × 4, flat-head, nylok-coated (2)	Black	2.0 ~ 2.5 kgfcm
2	M2.5 × 5 mm, flat-head, nylok-coated (6)	Silver	2.0 ~ 2.5 kgfcm

Figure 16. Removal steps of LCD panel, LCD cable, antenna assembly, and hinges (continued)

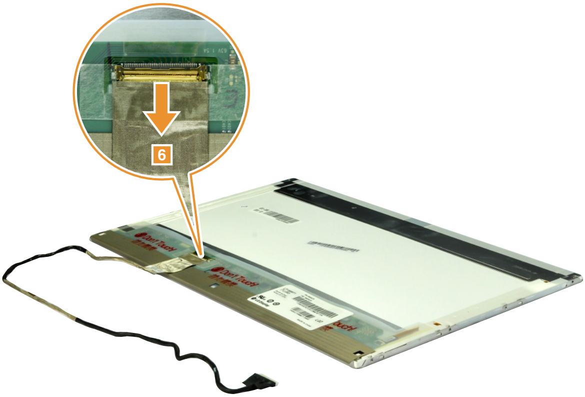
Remove six screws **4** . Lift the LCD panel with hinges in the direction shown by arrows **5** .



Step	Screw (quantity)	Color	Torque
4	M2.0 × 3 mm, flat-head, nylok-coated (6)	Black	1.0 ~ 1.5 kgfcm

Note: The LCD cables are attached to the LCD panel by a metal connector.

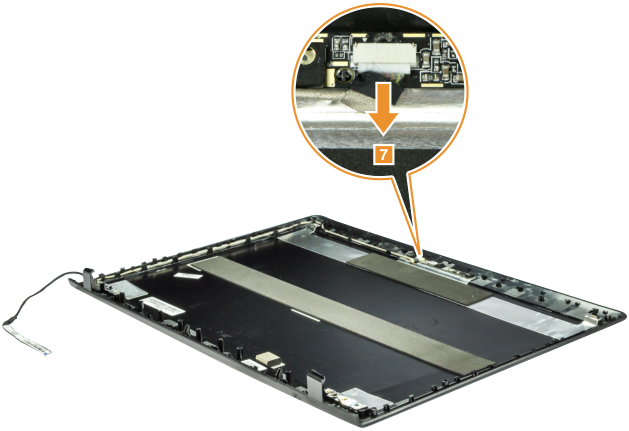
Peel off the adhesive tape and detach the connector in the direction shown by arrow **6**.

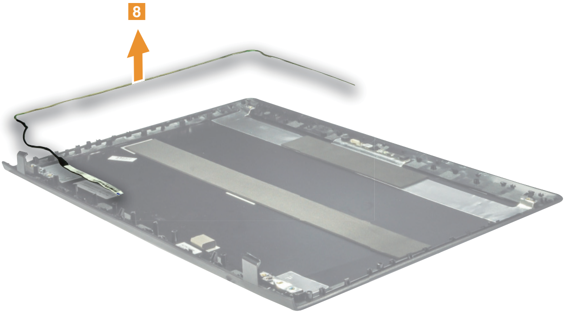


When installing: Make sure that the metal connector is attached firmly.

Figure 16. Removal steps of LCD panel, LCD cable, antenna assembly, and hinges (continued)

Unplug the integrated camera connector in the direction shown by arrow **7**. Then remove the camera cable in the direction shown by arrow **8**.





When installing: Make sure that the camera connector is attached firmly.

1170 Integrated camera

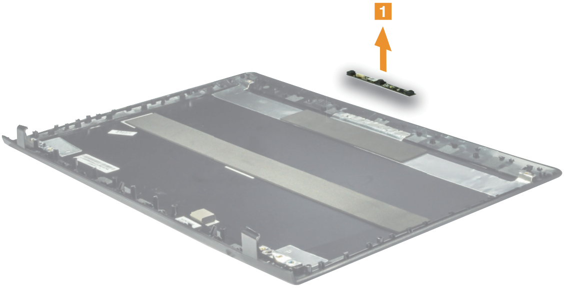
For access, remove these FRUs in order:

- see “1010 Battery pack” on page 34
- see “1020 Dummy card” on page 35
- see “1030 Optical drive” on page 36
- see “1040 Hard disk drive(HDD)/Memory/Mini PCI Express Card slot compartment cover” on page 37
- see “1050 Hard disk drive” on page 39
- see “1060 DIMM” on page 41
- see “1070 PCI Express Mini Card for wireless LAN/WAN” on page 42
- see “1080 Keyboard” on page 44
- see “1090 Keyboard bezel” on page 48
- see “1100 System board” on page 55
- see “1130 Base cover, speakers and power assembly” on page 62
- see “1140 LCD unit” on page 67
- see “1150 LCD front bezel” on page 71
- see “1160 LCD panel, LCD cable, antenna assembly, and hinges” on page 73

Figure 17. Removal steps of integrated camera

Note: The integrated camera is stuck on the top center of the LCD cover.

Remove the integrated camera from the LCD cover **1**.



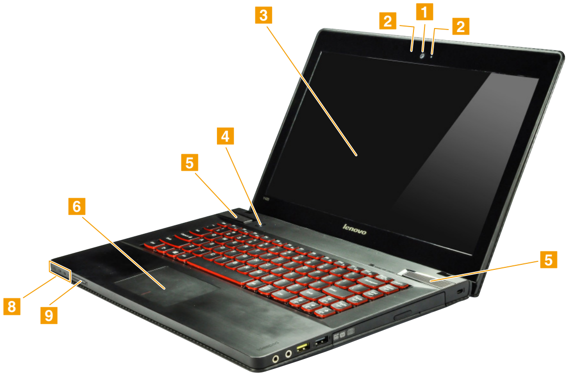
When installing: Stick the integrated camera to the top center of the LCD cover and adjust the placement of it to make sure the connector is attached firmly.

Locations

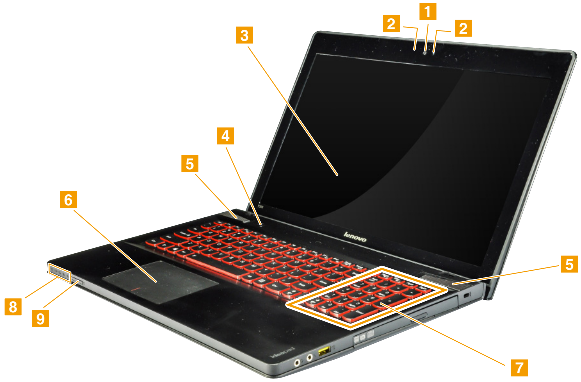
Front view

1 Integrated camera
2 Built-in microphone (with noise reduction)
3 Computer display
4 Power button
5 JBL speakers
6 Touch pad
7 Numeric keypad (Y510p)
8 System status indicators
9 Memory card slot

Y410p:



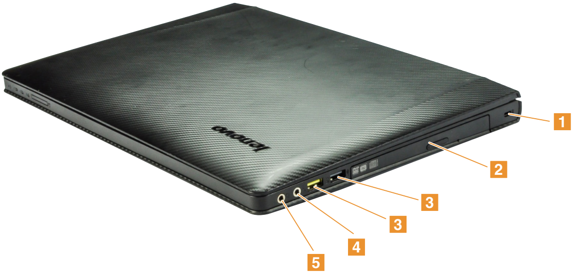
Y510p:



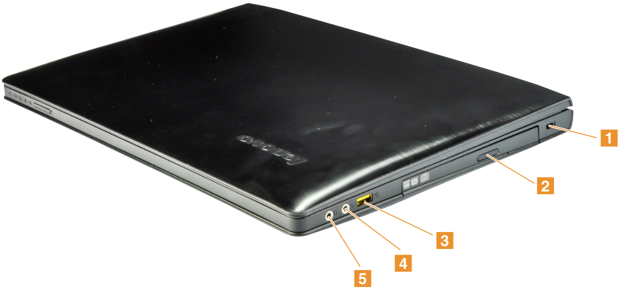
Right-side view

- **1** Kensington slot
- **2** Removable optional module (Optical disc drive/Graphics/Hard disk drive/Fan)
- **3** USB port
- **4** Microphone jack
- **5** Headphone jack

Y410p:



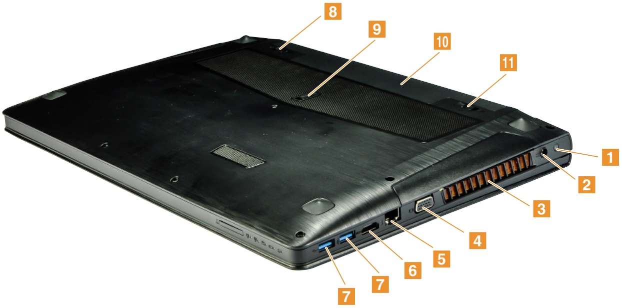
Y510p:



Bottom and Left-side view

1	Novo button
2	AC power adapter jack
3	Ventilation slots
4	VGA port
5	RJ-45 port
6	HDMI port
7	USB port
8	Battery latch - manual
9	Removable module lock
10	Battery pack
11	Battery latch - spring loaded
12	Louvers

Y410p: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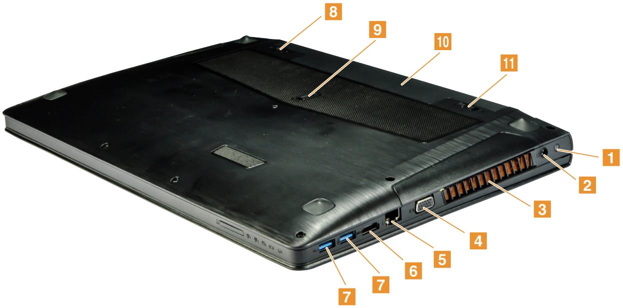
Y510p: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Parts list

This section presents the following service parts:

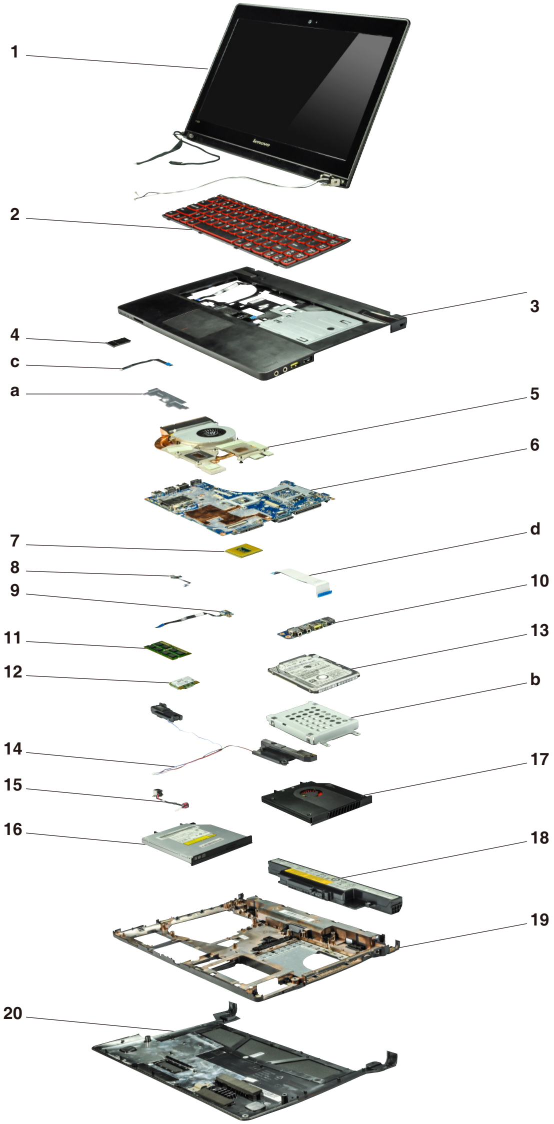
- see “Overall” on page 84
- see “LCD FRUs” on page 89
- see “Removable modules” on page 93
- see “Keyboard” on page 95
- see “Miscellaneous parts” on page 101
- see “AC adapters” on page 102
- see “Screws” on page 103
- see “Power cords” on page 104

Notes:

- Each FRU is available for all types or models, unless specific types or models are specified.

Overall

Y410p: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Y510p:

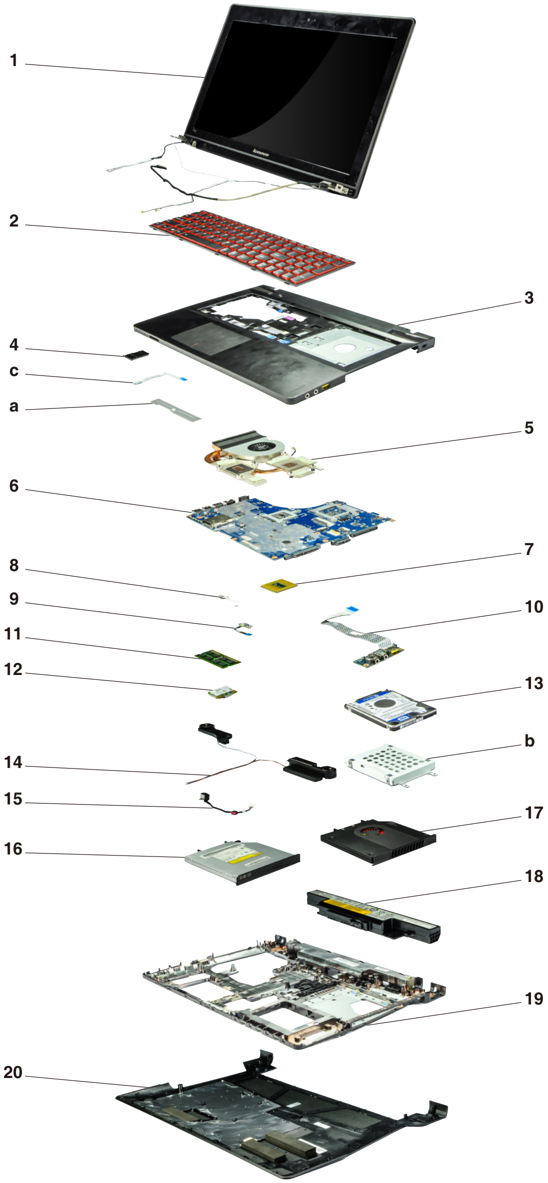
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Table 4. Parts list—Overall

No.	FRU	FRU no.	CRU ID
1	LCD unit (see “LCD FRUs” on page 89)		N
2	Keyboard (see “Keyboard” on page 95)		N
3	QIQY5 Upper Case(Y410p)	90201977	N
3	QIQY5 Upper Case N14P(Y410p)	90202611	N
3	QIQY6 Upper Case N14P(Y510p)	90202613	N
4	QIQY5 SD Dummy Card	90201944	N
5	VIQY0 Thermal Module(Y410p)	90202744	N
5	VIQY1 Thermal Module(Y510p)	90202747	N
6	VIQY0 MB 37W HD(Y410p)	90002904	N
6	VIQY0 MB 37W HD W8P(Y410p)	90002905	N
6	VIQY0 MB 37W HD W8S(Y410p)	90002906	N
6	VIQY0 MB 37W HD+(Y410p)	90002907	N
6	VIQY0 MB 37W HD+ W8P(Y410p)	90002908	N
6	VIQY0 MB 37W HD+ W8S(Y410p)	90002909	N
6	VIQY0 MB 47W HD(Y410p)	90002910	N
6	VIQY0 MB 47W HD W8P(Y410p)	90002911	N
6	VIQY0 MB 47W HD W8S(Y410p)	90002912	N
6	VIQY0 MB 47W HD+(Y410p)	90002913	N
6	VIQY0 MB 47W HD+ W8P(Y410p)	90002914	N
6	VIQY0 MB 47W HD+ W8S(Y410p)	90002915	N
6	VIQY0 MB 37W HD(Y510p)	90002916	N
6	VIQY0 MB 37W HD W8P(Y510p)	90002917	N
6	VIQY0 MB 37W HD W8S(Y510p)	90002918	N
6	VIQY0 MB 37W HD+(Y510p)	90002919	N
6	VIQY0 MB 37W HD+ W8P(Y510p)	90002920	N
6	VIQY0 MB 37W HD+ W8S(Y510p)	90002921	N
6	VIQY0 MB 47W HD(Y510p)	90002922	N
6	VIQY0 MB 47W HD W8P(Y510p)	90002923	N
6	VIQY0 MB 47W HD W8S(Y510p)	90002924	N
6	VIQY0 MB 47W HD+(Y510p)	90002925	N
6	VIQY0 MB 47W HD+ W8P(Y510p)	90002926	N
6	VIQY0 MB 47W HD+ W8S(Y510p)	90002927	N
7	Processor, Haswell Quad Core, 45W/35W, Intel, Intel I7-4702MQ 2.2G 4cPGA	102500541	N
7	Processor, Haswell Quad Core, 45W/35W, Intel, Intel I7-4700MQ 2.4G 4cPGA	102500540	N
7	Processor, Haswell Quad Core, 45W/35W, Intel, Intel I7-4800MQ 2.7G 4cPGA	102500560	N
7	Processor, Haswell Quad Core, 45W/35W, Intel, Intel I7-4900MQ 2.8G 4cPGA	102500561	N
8	QIQY5 Function Board (N14P)(Y410p)	90002552	N
8	QIQY6 Function Board W/Cable N14P(Y510p)	90002739	N
9	QIQY5 Power Board (N14P)(Y410p)	90002553	N
9	QIQY6 Power Board W/Cable N14P(Y510p)	90002738	N
10	QIQY5 Audio Board (N14P)(Y410p)	90002554	N
10	QIQY6 USB Board W/Cable N14P(Y510p)	90002737	N

Table 4. Parts list—Overall (continued)

No.	FRU	FRU no.	CRU ID
11	RAM, DDR3L 1600 2GB, Samsung, M471B5773DH0-YK0 2GB DDR3L 1600/SS M471B5773DH0-YK0 DDR3 1600 2GB	11200502	**
11	RAM, DDR3L 1600 2GB, SK hynix, HMT425S6AFR6A-PB	11201299	**
11	RAM, DDR3L 1600 2GB, Ramaxel, RMT3170ED58F8W-1600	11201835	**
11	RAM, DDR3L 1600 2GB, Micron, MT8KTF25664HZ-1G6M1	11200346	**
11	RAM, DDR3L 1600 4GB, Samsung, M471B5273DH0-YK0	11200503	**
11	RAM, DDR3L 1600 4GB, SK hynix, HMT451S6AFR8A-PB	11201300	**
11	RAM, DDR3L 1600 4GB, Ramaxel, RMT3170EB68F9W-1600	11201512	**
11	RAM, DDR3L 1600 4GB, Sharetronic, SM321NQ08ICF	11201834	**
11	RAM, DDR3L 1600 4GB, Micron, MT8KTF51264HZ-1G6J1	11201342	**
11	RAM, DDR3L 1600 8GB, Samsung, M471B1G73BH0-YK0	11200504	**
11	RAM, DDR3L 1600 8GB, SK hynix, HMT41GS6AFR8A-PB	11201301	**
11	RAM, DDR3L 1600 8GB, Sharetronic, SM322NW08IAF	11201514	**
11	RAM, DDR3L 1600 8GB, Micron, MT16KTF1G64HZ-1G6E1	11201304	**
12	WLAN, WiFi 2x2 BGN+BT4.0, Intel 2230 BGN+BT M PCIE HMC	20200078	N
12	WLAN, WiFi 1x1 BGN, Cbt BCM94313HMG 1x1BGN HMC	20200102	N
12	WLAN, WiFi 1x1 BGN, Liteon HB125 1x1BGN HMC	20200223	N
12	WLAN, WiFi AC+BT4.0, Ltn BCM4352+20702 2x2AC+BT4.0 HMC(Y410p)	20200381	N
12	WLAN, WiFi 2x2 ABGN+BT4.0, Cbt BCM943228HMB 2x2ABGN+BT4.0 HMC(Y410p)	20200221	N
12	WLAN, WiFi 2x2 ABGN+BT4.0, Liteon WB222 2x2ABGN+BT4.0 HMC(Y410p)	20200225	N
12	WLAN, WiFi 1x1 BGN+BT4.0, Cbt BCM943142HM 1x1BGN+BT4.0 HMC	20200222	N
12	WLAN, WiFi 1x1 BGN+BT4.0, Liteon WB225 1x1BGN+BT4.0 HMC	20200224	N
13	HDD, 500G 5400rpm, Seagate M8 BP1, ST500LM012 5.4K 9.5	16200323	N
13	HDD, 500G 5400rpm, WD(MN500S), WD5000LPVT-08G33T1 7mm 5.4K rpm	16200264	N
13	HDD, 500G 5400rpm, Seagate(Yarra 1D), ST500LT012 5.4K 7mm	16200211	N
13	HDD, 500G 5400rpm, HGST(Jaguar B7), HTS545050A7E380 RV 7mm 5.4K	16200297	N
13	HDD, 500G 5400rpm, Toshiba(Aqurius-B slim), MQ01ABF050 7mm 5.4K rpm (Not available due to SSD not kick off yet)	16200273	N
13	HDD, 750G 7200rpm hybrid, Seagate , ST750LX003 9.5mm 7.2K 750G SSHD(Y410p)	16200299	N

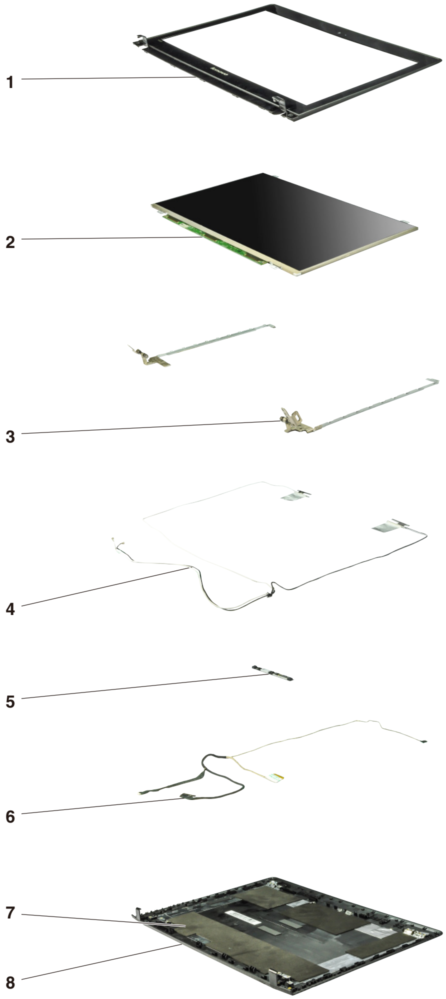
Table 4. Parts list—Overall (continued)

No.	FRU	FRU no.	CRU ID
13	HDD, 1TB 5400rpm, Seagate M8 BP1, ST1000LM024 5.4K 9.5	16200321	N
13	HDD, 1TB 5400rpm, WD(ML500M), WD WD10JPVT-24A1YT0 5400PRM 9.5mm	16200071	N
13	HDD, 1TB 5400rpm, HGST(Jaguar B), HTS541010A9E680 9.5 5.4K	16200193	N
13	HDD, 1TB 5400rpm, Toshiba(Aquarius-BS), TSB MQ01ABD100 9.5mm 5.4K (Not available due to SSDV not kick off)	16200219	N
13	HDD, 1TB 5400rpm hybrid, Seagate, 0C65974 VJ836 LVD1 ST1000LM014 8G 9.5mm 1T SSHD	16200389	N
14	Y490 JBL Blade N Speaker(Y410p)	101500184	N
14	Y590 JBL Odyssey II Speaker(Y510p)	101500185	N
15	QIQY5 DC-IN Board W/Cable(Y410p)	90001126	N
15	QIQY6 DC-IN Board W/Cable(Y510p)	90001162	N
16	Removable optical disc drive (see “Removable modules” on page 93).		*
17	Removable graphics (see “Removable modules” on page 93).		N
18	Battery, Yx0 LG L12L6E01 11.1V62Wh 6cellbty	121500126	*
18	Battery, Yx0 SY L12S6E01 10.8V62Wh 6cellbty	121500127	*
18	Battery, Yx10 LG L12L6A01 10.8V48Wh 6cellbty	121500148	*
18	Battery, Yx10 SY L12S6A01 10.8V48Wh 6cellbty	121500149	*
18	Battery, Y490 Sanyo L11S6R01 10.8V72Wh 6cellbty	121500070	*
19	QIQY5 Lower Case(Y410p)	90201978	N
19	QIQY6 Lower Case(Y510p)	90202006	N
20	QIQY5 Thermal Door(Y410p)	90201951	N
20	QIQY6 Thermal Door(Y510p)	90201985	N
—	AC power adapter (see “AC adapters” on page 102).		

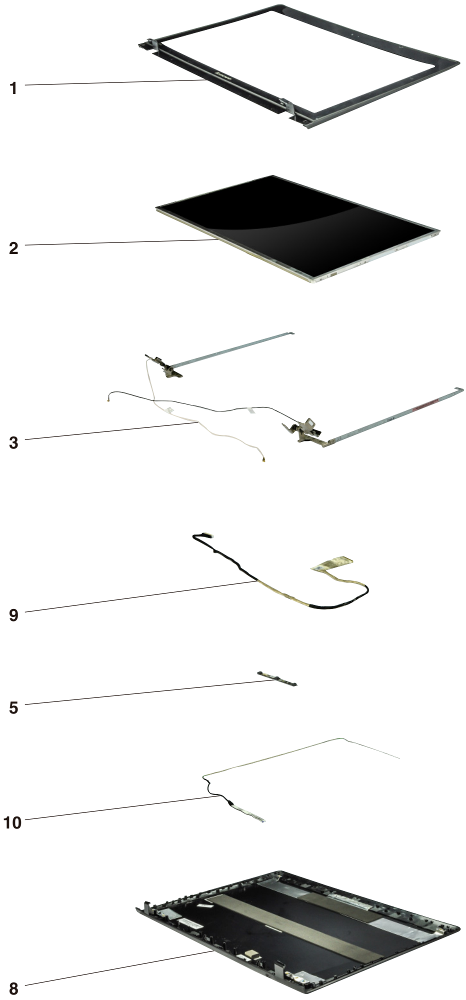
LCD FRUs

In Lenovo IdeaPad Y410p/Y510p, there are following types of LCDs.

- "14.0-in. HD LED" Y410p



- “15.6-in. HD LED” Y510p



14.0-in. HD TFT (Y410p)

Table 5. Parts list—14.0-in. HD LED

No.	FRU	FRU no.	CRU ID
1	VIQY0 LCD Bezel	90202745	N
2	Panel, 14.0F Glare, AUO B140XTN03.0 9A HD G F LED1 NB LCD	18200625	N
2	Panel, 14.0F Glare, SDC LTN140AT28 L01 HD G F LED1 NB LCD	18200829	N
2	Panel, 14.0F Glare, LGD LP140WH2 TLS1 HD G F LED1 NB LCD	18200820	N
2	Panel, 14.0F Glare, BOE HB140WX1-300 HD G F LED1 NB LCD	18200761	N
2	Panel, 14.0F Glare, CMI N140BGE-L42 HD G F LED1 NB LCD	18200153	N
2	Panel, HD+, SDC LTN140KT12 L01 HD+ G F LED1 NB LCD	18200885	N
2	Panel, HD+, LGD LP140WD2-TLC1 HD+ G F LED1 NB LCD	18200781	N
2	Panel, HD+, AUO B140RW02 V0 HW3A HD+ G F LED1 NB LCD	18200782	N
3	QIQY5 Hinge R	90201972	N
3	QIQY5 Hinge L	90201973	N
4	QIQY5 Antenna	90201940	N
4	QIQY5 Antenna3*3	90202485	N
5	QIQY5 Camera Board USB2.0	90002863	N
6	VIQY0 LCD Cable W/Camera Cable	90202746	N
7	QIQY5 LCD Cover Sponge	90201974	N
8	QIQY5 LCD Cover Antenna3*3	90202484	N
8	QIQY5 LCD Cover	90201976	N

15.6-in. HD TFT (Y510p)

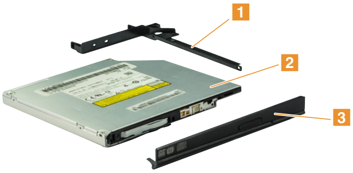
Table 6. Parts list—15.6-in. HD LED

No.	FRU	FRU no.	CRU ID
1	VIQY1 LCD Bezel	90202748	N
2	Panel, 15.6W Wedge, AUO B156XTN02.0 HD G W LED1 NB LCD	18200157	N
2	Panel, 15.6W Wedge, SEC LTN156AT24-L01 HD G W LED1 NB LCD	18200114	N
2	Panel, 15.6W Wedge, LGD LP156WH4-TLN2 HD G W LED1 NB LCD	18201011	N
2	Panel, 15.6W Wedge, CMI N156BGE-L21 HD G W LED1 NB LCD	18004787	N
2	Panel, 15.6W Wedge, BOE HB156WX1-100 HD G W LED1 NB LCD	18200677	N
2	Panel, IPS optionLGD LP156WHA SLL1 HD G W LED1 NB LCD	18200830	N
2	Panel, 15.6W Wedge FHD, LGD LP156WF1-TLC1 FHD G W LED1 NB LCD	18200442	N
2	Panel, 15.6W Wedge FHD, LGD LP156WF1-TLB2 FHD AG W LED1 NB LCD	18200453	N
3	QIQY6 Hinge&Bracket L W/Antenna	90201996	N
3	QIQY6 Hinge&Bracket R W/Antenna	90201997	N
5	VIQY0 Camera Board USB2.0	90002863	N
5	QIQY5 Camera Board USB3.0	90002928	N
8	QIQY6 LCD Cove	90202004	N
9	VIQY1 LCD Cable	90202749	N
10	QIQY6 Camera Board Cable N14P	90202615	N

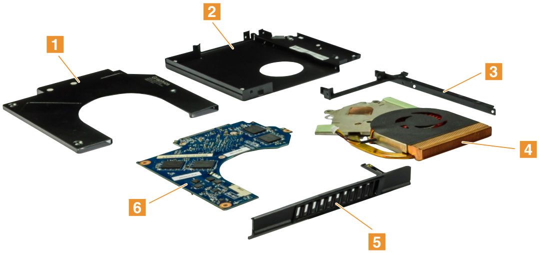
Removable modules

In Lenovo IdeaPad Y410p/Y510p, there are following types of removable modules.

- Removable optical disc drive



- Removable graphics



Removable optical disc drive

Table 7. Parts list—Removable optical disc drive

No.	FRU	FRU no.	CRU ID
1	QIQY5 Module Frame For ODD (Y410p)	90201959	N
1	QIQY6 Module Frame For ODD (Y510p)	90201990	N
2	ODD, 9.5mm Tray in Rambo, HLDS GU70N Slim Tray DVD Rambo ODD	25205807	N
2	ODD, 9.5mm Tray in Rambo, PSN UJ8DB Slim Tray DVD Rambo ODD	25212030	N
2	ODD, 9.5mm Tray in Rambo, PLDS DU-8A5SH Slim Tray DVD Rambo ODD	25204155	N
2	ODD, 9.5mm Tray in Rambo, PSN UJ262 9.5mm BD Rambo w/o bezel-LH(ES sample ready)	25209259	N
2	ODD, 9.5mm Tray in Rambo, HLDS BU10N 9.5mm BD Rambo w/o bezel-LH	25209260	N
3	QIQY5 ODD Bezel (Y410p)	90201958	N
3	QIQY5 ODD Bezel BD (Y410p)	90202345	N
3	QIQY6 ODD Bezel (Y510p)	90201989	N
3	QIQY6 ODD Bezel BD (Y510p)	90202344	N

Removable graphics

Table 8. Parts list—Removable graphics

No.	FRU	FRU no.	CRU ID
1	QIQY5 2ND VGA Upper Case N14P (Y410p)	90202610	N
1	QIQY6 2ND VGA Upper Case N14P (Y510p)	90202612	N
2	QIQY5 2ND VGA Lower Case	90201964	N
3	QIQY5 2ND Module Frame For(VGA/Fan/HDD) (Y410p)	90201962	N
3	QIQY6 2ND Module Frame For(VGA/Fan/HDD) (Y510p)	90201992	N
4	QIQY5 2ND VGA Thermal Moudle	90201966	N
5	QIQY5 2ND VGA Bezel (Y410p)	90201961	N
5	QIQY6 2ND VGA Bezel (Y510p	90201991	N
6	QIQY5 2ND VGA Board (N14P)	90002551	N

Keyboard

Table 9. Parts list—Keyboard

Language			P/N	CRU ID
Y410p (Win 8)	Chicony	English	25205228	N
		U.K. English	25205229	N
		Italian	25205230	N
		Spanish	25205231	N
		Turkish	25205232	N
		Thai	25205233	N
		Portuguese	25205234	N
		Latin	25205235	N
		Canadian English&French	25205236	N
		Korean	25205237	N
		Traditional Chinese	25205238	N
		Russian	25205239	N
		French	25205240	N
		German	25205241	N
		Arabic	25205242	N
		Brazilian	25205243	N
		Japanese	25205244	N
		Dutch	25205245	N
		Greek	25205246	N
		Hebrew	25205247	N
		Hungarian	25205248	N
		Four Nordic countries	25205249	N
		Belgian	25205250	N
		Icelandic	25205251	N
		Slovenian	25205252	N
		Swiss	25205253	N
		International English	25205254	N
		Czechoslovakian	25205255	N
		Bulgarian	25205256	N
		Indian	25205257	N
	Chicony (Backlight)	English	25205318	N
		U.S. English	25205513	N
		U.K. English	25205319	N
		Italian	25205320	N
		Spanish	25205321	N
		Turkish	25205322	N
		Thai	25205323	N
		Portuguese	25205324	N
		Latin	25205325	N
		Canadian English&French	25205326	N
		Korean	25205327	N
		Traditional Chinese	25205328	N
		Russian	25205329	N
		French	25205330	N
		German	25205331	N
		Arabic	25205332	N
		Brazilian	25205333	N
		Dutch	25205335	N

Table 9. Parts list—Keyboard (continued)

Language			P/N	CRU ID
Y410p (Win 8)	Chicony (Backlight) (continued)	Greek	25205336	N
		Hebrew	25205337	N
		Hungarian	25205338	N
		Four Nordic countries	25205339	N
		Belgian	25205340	N
		Icelandic	25205341	N
		Slovenian	25205342	N
		Swiss	25205343	N
		International English	25205344	N
		Czechoslovakian	25205345	N
		Bulgarian	25205346	N
		Indian	25205347	N
	Sunrex	English	25205258	N
		U.K. English	25205259	N
		Italian	25205260	N
		Spanish	25205261	N
		Turkish	25205262	N
		Thai	25205263	N
		Portuguese	25205264	N
		Latin	25205265	N
		Canadian English&French	25205266	N
		Korean	25205267	N
		Traditional Chinese	25205268	N
		Russian	25205269	N
		French	25205270	N
		German	25205271	N
		Arabic	25205272	N
		Brazilian	25205273	N
		Dutch	25205275	N
		Greek	25205276	N
		Hebrew	25205277	N
		Hungarian	25205278	N
		Four Nordic countries	25205279	N
		Belgian	25205280	N
		Icelandic	25205281	N
		Slovenian	25205282	N
		Swiss	25205283	N
		International English	25205284	N
		Czechoslovakian	25205285	N
		Bulgarian	25205286	N
		Indian	25205287	N

Table 9. Parts list—Keyboard (continued)

Language			P/N	CRU ID
Y410p (Win 8)	Sunrex (Backlight)	English	25205348	N
		U.S. English	25205514	N
		U.K. English	25205349	N
		Italian	25205350	N
		Spanish	25205351	N
		Turkish	25205352	N
		Thai	25205353	N
		Portuguese	25205354	N
		Latin	25205355	N
		Canadian English&French	25205356	N
		Korean	25205357	N
		Traditional Chinese	25205358	N
		Russian	25205359	N
		French	25205360	N
		German	25205361	N
		Arabic	25205362	N
		Brazilian	25205363	N
		Dutch	25205365	N
		Greek	25205366	N
		Hebrew	25205367	N
		Hungarian	25205368	N
		Four Nordic countries	25205369	N
		Belgian	25205370	N
		Icelandic	25205371	N
		Slovenian	25205372	N
		Swiss	25205373	N
		International English	25205374	N
		Czechoslovakian	25205375	N
		Bulgarian	25205376	N
		Indian	25205377	N
	Darfon	English	25205288	N
		U.K. English	25205289	N
		Italian	25205290	N
		Spanish	25205291	N
		Turkish	25205292	N
		Thai	25205293	N
		Portuguese	25205294	N
		Latin	25205295	N
		Canadian English&French	25205296	N
		Korean	25205297	N
		Traditional Chinese	25205298	N
		Russian	25205299	N
		French	25205300	N
		German	25205301	N
		Arabic	25205302	N
		Brazilian	25205303	N
		Dutch	25205305	N

Table 9. Parts list—Keyboard (continued)

Language			P/N	CRU ID
Y410p (Win 8)	Darfon (continued)	Greek	25205306	N
		Hebrew	25205307	N
		Hungarian	25205308	N
		Four Nordic countries	25205309	N
		Belgian	25205310	N
		Icelandic	25205311	N
		Slovenian	25205312	N
		Swiss	25205313	N
		International English	25205314	N
		Czechoslovakian	25205315	N
		Bulgarian	25205316	N
		Indian	25205317	N
	Darfon (Backlight)	English	25205378	N
		U.K. English	25205515	N
		U.S. English	25205379	N
		Italian	25205380	N
		Spanish	25205381	N
		Turkish	25205382	N
		Thai	25205383	N
		Portuguese	25205384	N
		Latin	25205385	N
		Canadian English&French	25205386	N
		Korean	25205387	N
		Traditional Chinese	25205388	N
		Russian	25205389	N
		French	25205390	N
		German	25205391	N
		Arabic	25205392	N
		Brazilian	25205393	N
		Japanese	25205394	N
		Dutch	25205395	N
		Greek	25205396	N
		Hebrew	25205397	N
		Hungarian	25205398	N
		Four Nordic countries	25205399	N
		Belgian	25205400	N
		Icelandic	25205401	N
		Slovenian	25205402	N
		Swiss	25205403	N
		International English	25205404	N
		Czechoslovakian	25205405	N
		Bulgarian	25205406	N
		Indian	25205407	N

Table 9. Parts list—Keyboard (continued)

Language			**P/N**	**CRU ID**
Y510p (Win 8)	Chicony (Backlight)	English	25205408	N
		U.S. English	25205516	N
		U.K. English	25205409	N
		Italian	25205410	N
		Spanish	25205411	N
		Turkish	25205412	N
		Thai	25205413	N
		Portuguese	25205414	N
		Latin	25205415	N
		Canadian English&French	25205416	N
		Korean	25205417	N
		Traditional Chinese	25205418	N
		Russian	25205419	N
		French	25205420	N
		German	25205421	N
		Arabic	25205422	N
		Brazilian	25205423	N
		Dutch	25205425	N
		Greek	25205426	N
		Hebrew	25205427	N
		Hungarian	25205428	N
		Four Nordic countries	25205429	N
		Belgian	25205430	N
		Icelandic	25205431	N
		Slovenian	25205432	N
		Swiss	25205433	N
		International English	25205434	N
		Czechoslovakian	25205435	N
		Bulgarian	25205436	N
		Indian	25205437	N
	OKI (Backlight)	English	25205438	N
		U.S. English	25205518	N
		U.K. English	25205439	N
		Italian	25205440	N
		Spanish	25205441	N
		Turkish	25205442	N
		Thai	25205443	N
		Portuguese	25205444	N
		Latin	25205445	N
		Canadian English&French	25205446	N
		Korean	25205447	N
		Traditional Chinese	25205448	N
		Russian	25205449	N
		French	25205450	N
		German	25205451	N
		Arabic	25205452	N
		Brazilian	25205453	N
		Dutch	25205455	N

Table 9. Parts list—Keyboard (continued)

Language			P/N	CRU ID
Y510p (Win 8)	OKI (Backlight) (continued)	Greek	25205456	N
		Hebrew	25205457	N
		Hungarian	25205458	N
		Four Nordic countries	25205459	N
		Belgian	25205460	N
		Icelandic	25205461	N
		Slovenian	25205462	N
		Swiss	25205463	N
		International English	25205464	N
		Czechoslovakian	25205465	N
		Bulgarian	25205466	N
		Indian	25205467	N
	Dafon (Backlight)	English	25205474	N
		U.S. English	25205517	N
		U.K. English	25205475	N
		Italian	25205476	N
		Spanish	25205477	N
		Turkish	25205478	N
		Thai	25205479	N
		Portuguese	25205480	N
		Latin	25205481	N
		Canadian English&French	25205482	N
		Korean	25205483	N
		Traditional Chinese	25205484	N
		Russian	25205485	N
		French	25205486	N
		German	25205487	N
		Arabic	25205488	N
		Brazilian	25205489	N
		Japanese	25205490	N
		Dutch	25205491	N
		Greek	25205492	N
		Hebrew	25205493	N
		Hungarian	25205494	N
		Four Nordic countries	25205495	N
		Belgian	25205496	N
		Icelandic	25205497	N
		Slovenian	25205498	N
		Swiss	25205499	N
		International English	25205500	N
		Czechoslovakian	25205501	N
		Bulgarian	25205502	N
		Indian	25205503	N

Miscellaneous parts

Table 10. Parts list—Miscellaneous parts

FRU	P/N	CRU ID
System miscellaneous parts: • (a) QIQY5 TP Sheet(Y410p) • (a) QIQY6 TP Bracket(Y510p) • (b) QIQY5 HDD Bracket	90201953 90201994 90201952	N
Cable miscellaneous parts: • (c) QIQY5 TP Cable(Y410p) • (c) QIQY6 TP Cable(Y510p) • (d) QIQY5 Audio Cable **Note:** Italicized letters in parentheses are references to the exploded view in "Overall" on page 84.	90201969 90202007 90201971	N

AC adapters

Table 11. Parts list—AC adapters

FRU	P/N	CRU ID
90W, Delta ADP-90DD BD 20V4.5A adapter-CCC(Y410p)	36200397	*
90W, Liteon PA-1900-56LC 20V4.5A adapter-CCC(Y410p)	36200404	*
90W, Chicony CPA-A090 20V4.5A adapter-CCC(Y410p)	36200414	*
120W, Liteon PA-1121-16 19.5V6.15A adapter-CCC	36200403	*
120W, Delta ADP-120LH BA 19.5V6.15Aadapter-CCC	36200400	*
170W, Delta 45N0111 20V8.5A adapter-CCC(Y510p)	36200401	*

Screws

Table 12. Parts list—Screws

FRU	P/N	CRU ID
QIQY5 SCREW 2D 3L K 4.5D ZK NL +CR3+0.4T	90001118	N
QIQY5 SCREW 2D 4.0L K 4.0D NI NL +0.3T	90201932	N
QIQY5 SCREW 2 2.0D 2L K 7D ZK NL + CR3+(Y410p)	90201933	N
QIQY5 SCREW 2.5D 4.0L K 5.5D ZK NL +CR3+(Y410p)	90201934	N
QIQY5 SCREW 2.45D 8.0L 5.5D 0.8T ZK NL+(Y410p)	90201935	N
QIQY5 SCREW 3.0D 3.0L K 4.9D NI +	90201936	N
QIQY5 SCREW 2D 3.2+2.8L K 6.5 1.0T NI +	90201937	N
QIQY5 SCREW MM 2D4.0L K 4.0D ZK NL+0.3T	90201938	N
QIQY6 SCREW 2D 3L K 8D ZK NL+(Y510p)	90201998	N
QIQY6 SCREW 2.5D 4.0L K4.6D ZK NL+CR3+(Y510p)	90201999	N
QIQY6 SCREW 2.5D 10L K5.5D ZK NL+CR3+(Y510p)	90202000	N
QIQY6 SCREW 2.5D 5.0L K 4.6D NI NL+(Y510p)	90202001	N

Power cords

A Lenovo power cord for a specific country or region is usually available only in that country or region:

Table 13. Parts list—3-pin power cords

Region	P/N	CRU ID
China • LINETEK PC323+RVV300/300+LS15 1m	145000600	*
Argentina • LINETEK LS15+H03VV-F+LP39 1m	145000599	*
Danmark • LINETEK LS15+H03VV-F+LP-38 1m	145000598	*
Switzerland • LINETEK LS15+H03VV-F+LP-37 1m	145000597	*
Brazil • LINETEK LS15 H03VV-F LP26A 1m	145000596	*
Israel • LINETEK LS15+H03VV-F+LP-41 1m	145000595	*
UL • LINETEK LP-30B + SPT-2 + LS15 1m	145000594	*
UK • LINETEK LP-61L+ H03VV-F+ LS15 1m	145000593	*
India • LINETEK PE-361+ H05VV-F+ LS15 1m	145000592	*
Italy • LINETEK LS15+H03VV-F+PE-336 1m	145000591	*
Korea • LINETEK LS15+H05VV-F+LP-E04A 1m	145000590	*
ANZ • LINETEK LS15+H03VV-F+LP-23A 1m	145000589	*
TW • LINETEK LS15+VCTF+LP-53 1m	145000588	*
Japan • LINETEK LS15+VCTF+LP-54 1m	145000587	*
SA • LINETEK LS15+H03VV-F+PE-364 1m	145000586	*
CE • LINETEK LP-34+H03VV-F + LS15 1m	145000585	*
China • Longwell LSG-31+RVV300/300+LS-18 1m	145000568	*
Argentina • Longwell LP-24+H03VV-F+LS-18 1m	145000567	*
Danmark • Longwell LP-40+H03VV-F+LS-18 1m	145000566	*
Switzerland • Longwell LP-37+H03VV-F+LS-18 1m	145000565	*

Table 13. Parts list—3-pin power cords (continued)

Region	P/N	CRU ID
Brazil • Longwell LP-46+H03VV-F+LS-18 1m	145000564	*
Israel • Longwell LP-41+H03VV-F+LS-18 1m	145000563	*
UL • Longwell LP-30B+SPT-2 18AWG+LS-18 1m	145000562	*
UK • Longwell LP-61L+H03VV-F+LS-18 1m	145000561	*
India • Longwell LP-67+BIS+LS-18 1m	145000560	*
Italy • Longwell LP-22+H03VV-F+LS-18 1m	145000559	*
Korea • Longwell LP-486+KTLH03VV-F+LS-5 1m	145000558	*
ANZ • Longwell LP-23A+LFC-3R+LS-18 1m	145000557	*
TW • Longwell LP-71+VCTF+LS-33 1m	145000556	*
Japan • Longwell LP-54+VCTF+LS-18 1m	145000555	*
SA • Longwell LP-39+H03VV-F+LS-18 1m	145000554	*
CE • Longwell LP-34A+H03VV-F+LS-18 1m	145000553	*
China • VOLEX GB10S3+RVV 300/500+VAC5S 1m	145000538	*
UL • Volex US15S3+SPT-2 +VAC5S 1m	145000537	*
India • VOLEX IA6A3+IS694+VAC5S 1m	145000536	*
Italy • VOLEX IT10S3+HO3VV-F+VAC5S 1m	145000535	*
Denmark • VOLEX MP233D+H03VV-F+VAC5S 1m	145000534	*
Korea • VOLEX M2511+KETI IEC+VAC5S 1m	145000533	*
ANZ • VOLEX AU10S3+H03VV-F+VAC5S 1m	145000532	*
TW • VOLEX TW15CS3+VCTF+VAC5S 1m	145000531	*
Japan • VOLEX VAC5S+VCTF+M755 1m	145000530	*

Table 13. Parts list—3-pin power cords (continued)

Region	**P/N**	**CRU ID**
Argentina • VOLEX VA2073+H03VV-F+VAC5S 1m	145000528	*
Brazil • VOLEX CH10S3+H03VV-F+VAC5S 1m	145000527	*
Israel • VOLEX SI16S3+H03VV-F+VAC5S 1m	145000526	*
CE • VOLEX M2511+HO3VV-F+VAC5S 1m	145000525	*
Switzerland • VOLEX MP232+H03VV-F+VAC5S 1m	145000524	*
UK • VOLEX MP5004+H03VV-F+VAC5S 1m	145000605	*
UK • lux 0031+H03VV-F 0.75/3C+0011 1m	145500000	*
CE • lux 0033+H03VV-F 0.75/3C+0011 1m	145500001	*
UL • lux 0014+SPT-2 60°C 18/3C+0016 1m	145500002	*
China • lux 0036+RVV 300/300 0.75/3C+0002 1m	145500003	*
India • lux 0046+IS694 0.75/3C+0011 1m	145500004	*
Japan • lux 0018(E)+VCTF 0.75/3C+0021 1m	145500005	*
ANZ • lux 0038+H03VV-F 0.75/3C+0011 1m	145500006	*
TW • lux 0019+VCTF 0.75/3C+0021 1m	145500007	*
Korea • lux 0033+H03VV-F 0.75/3C+0011 1m	145500008	*
Italy • lux 0029+H03VV-F 0.75/3C+0011 1m	145500009	*
SA • lux 0044+H03VV-F 0.75/3C+0011 1m	145500010	*
Brazil • lux 0034+H03VV-F 0.75/3C+0011 1m	145500011	*
Israel • lux 0041+H03VV-F 0.75/3C+0011 1m	145500012	*
Switzerland • lux 0027+H03VV-F 0.75/3C+0011 1m	145500013	*
Danmark • lux 0048+H03VV-F 0.75/3C+0011 1m	145500014	*
Argentina • lux 0040+H03VV-F 0.75/3C+0011 1m	145500015	*

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